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SECTION II

(16th EDITION)

GENERAL EQUIPMENT

CONTAINING

B.T.L. STANDARD APPARATUS
FOR THE EQUIPMENT OF ALL
SCIENTIFIC LABORATORIES

BAIRD & TATLOCK (LONDON) LTD.

Office and Warehouse :

14-17 CROSS STREET, HATTON GARDEN, LONDON, E.C. 1

Instrument Works :

HIGHAM LODGE, BLACKHORSE LANE, WALTHAMSTOW

EASTERN BRANCH (Office, Warehouse, Showroom and Repair Shop)

Avenue House, Chowringhee Square, CALCUTTA, INDIA

NEW ZEALAND: A. C. EVANS,
P.O. Box 240, PALMERSTON NORTH

CANADA: WILSON SCIENTIFIC INSTRUMENT CO.,
59 Wellington Street, West, TORONTO, 2

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50 Avenue Mosque, Heliopolis, CAIRO

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IN compiling this New Edition of our Standard Catalogue in Sectional Form, our aim has been to make it as convenient as possible for our clients to find any article they want, in the minimum space of time. Below will be found an outline of the Contents of each Section:—

SECTION I.—Typical examples of Benches, Fume Cupboards, Taps and Sinks, and is meant as a guide to clients when designing their laboratories.

SECTION II.—Apparatus required for the permanent equipment of a laboratory such as Balances, Furnaces, Ovens, Pumps and Stills alphabetically arranged.

SECTION III.—Ordinary apparatus required for laboratory use, such as Glassware, Porcelain Ware, Filter Paper and Graduated Ware, etc. These are also arranged alphabetically.

SECTIONS IV and V.—Thermometers and Pyrometers and heat-recording apparatus for all purposes.

SECTION VI.—Special apparatus scientifically grouped and arranged for all branches of Physico-Chemical Work.

SECTION VII.—Refractometers, Spectroscopes and Polariscopes.

SECTION VIII to SECTION XIV.—Specialised apparatus of all descriptions such as is required for Scientific and Industrial Research Laboratories as detailed in the Section Summary.

SECTION XV.—Apparatus for all the branches of Meteorology, etc.

SECTION XX.—Models for Anatomical work; a fuller and complete catalogue is sent on application.

SECTION XXI.—Apparatus for Botany and Entomology.

SECTION XXII.—A full range of British and Foreign Microscopes, Epidiascopes, Episcopes, and Cameras for scientific purposes.

SECTION XXIII to SECTION XXVI.—Special apparatus for Bacteriology, Histology, Microscopy, Pathology and Biochemistry such as Microscope Slides, Cover Glasses, Microtomes, Incubators, Autoclaves, Embedding and Wassermann Baths, etc.

SECTION XXVII to SECTION XXVIII.—Special apparatus for Physiology, Pharmacology and Psychology.

Lists of Technical books and Index complete the whole range of Apparatus and Catalogue Vol. I, II, III. Vol. IV is still



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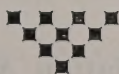


SECTION II

GENERAL EQUIPMENT

CONTAINING

B.T.L. STANDARD APPARATUS
FOR THE EQUIPMENT OF ALL
SCIENTIFIC LABORATORIES



Laboratories Completely Equipped
Estimates given upon receipt of ground plan
and full particulars

VOL. I.

SECTION II.

GENERAL EQUIPMENT.

This section comprises those articles which are required for the equipment of a laboratory and are in general use in almost all laboratories. For glassware, etc., and other articles which have to be replaced from time to time, see Section III.

A. Laboratory Workshop	Page	87
B. Balances and Weights	„	94
C. Blowpipes and Accessories	„	133
D. Burners, Gas and Petroleum, etc.	„	142
E. Centrifuges	„	159
F. Drying Ovens, Hot Air, Water, and Steam	„	183
G. Evaporating Baths	„	217
H. Furnaces	„	232
J. Laboratory Mills	„	285
K. Motors	„	304
L. Presses and Filter Presses	„	312
M. Pumps and Gauges	„	321
N. Shaking and Stirring Apparatus	„	348
O. Stands and Clamps	„	358
P. Stills and Vacuum Distillation Apparatus	„	378

The following will be found in Section VI: Physical Chemistry.

Calorimeters.

Colorimeters.

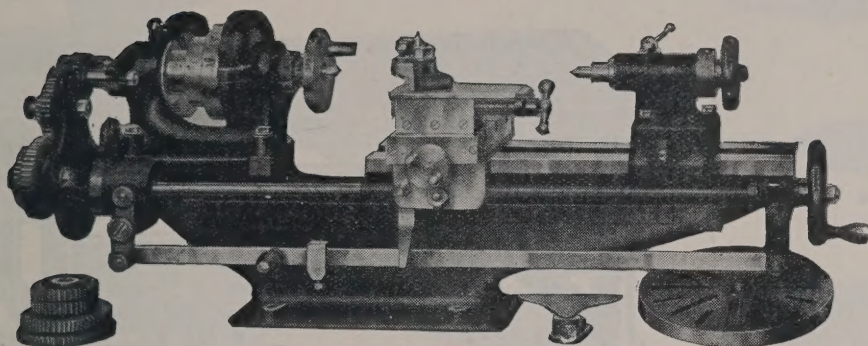
Measuring Instruments.

Thermostats.

Hydrogen Ion Apparatus,
Etc., etc.

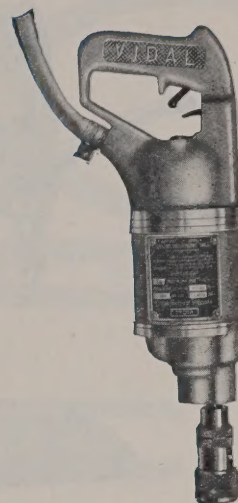
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VOL. I—SECTION IIa.
Laboratory Workshop.



SC2

SC2 Workshop Lathe, 4 in. Model Maker's Lathe, Type A, on stand, with countershaft.



SC4-SC10

The lathe is of the very finest workmanship throughout and of great weight for its size. The bed is of cast-iron, very stiff, and of hollow circular form, and is ground on a "Norton" grinding machine to a limit of error of one ten-thousandth of an inch. The mandrel is steel, 1 in. diameter in bearings, *ground* dead true after turning, and runs in adjustable bearings. Speed cone is polished cast-iron with three steps for flat belt. Mandrel nose is $\frac{3}{8}$ in. standard Whitworth thread bored No. 1 Morse taper for centres. Centres are cast-steel, hardened and *ground* and interchangeable. Poppet head has set-over adjustment for long slight taper work, and is fitted with steel barrel and polished hand wheel. Saddle is formed as surface $\perp$ slotted boring table for large boring work, and carries slide rest which is also formed into a $\perp$ slotted plate for holding work for milling. Tool holder is self-contained, and throws no strain on the central bolt, which is removable for milling or small boring operations. Steel screw to slide fitted with polished hand wheel. Slide has vee guides and provision for taking up wear. Cross slide can be turned to any angle, and is graduated. *Cross slide is also adjustable for height*, the saddle being capable of being revolved partly round the bed and locked at any angle *without disturbing the adjustment for sliding*. Machine-cut leadscrew full length of bed, running central with bed, *completely out of the way of dirt and chips*.

A set of nine change wheels is included which will cut the following threads per inch : 5, 6, 7, 8, 9, 10, 11, 12, 14, 16, 18, 20, 24, 32, 40, 48, all of which are standard Whitworth threads ; also a great variety of odd and fine threads, and sliding speeds down to 150 per inch. A reversing wheel and secondary quadrant is provided, enabling all screws to be cut either *right- or left-hand*. All gear wheels are cut on the finest automatic machines from solid blanks.

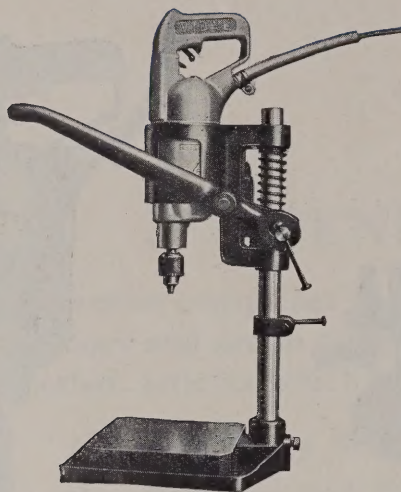
Each lathe has the following accessories : face-plate and driver-chuck combined, tool-steel coned centres, one angle-plate, with bolt and spanner.

Price f£21 0 0

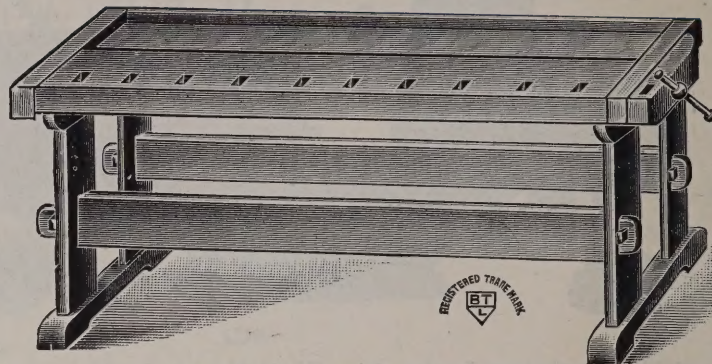
Details and prices for other pattern lathes, pulleys, motors, etc. upon request.

SC4/10 Portable Electric Drills, best British manufacture, pistol grip models with Universal type motor, standard voltages.

	Type.	Duty.	Approx. Nett Weight. Lbs.	Free Speed. Approx. R.P.M.	Capacity.			Regular Equipment supplied with each Machine and included in Price.	Price.
					Drill in Steel.	Drill in Hard Wood.	Ream in Steel.		
SC4	UIP $\frac{1}{4}$ "	Heavy	9 $\frac{1}{4}$	1800	$\frac{1}{4}$ "	$\frac{3}{8}$ "	—	Chuck, 15-ft. 3-core flex. cable, set spare carbon brushes for motor.	f£10 10 0
SC6	UIP $\frac{5}{16}$ "	Heavy	9 $\frac{3}{4}$	1125	$\frac{5}{16}$ "	$\frac{7}{16}$ "	—		f£11 2 0
SC8	UIP $\frac{3}{8}$ "	Normal	10	860	$\frac{3}{8}$ "	$\frac{1}{2}$ "	—		f£11 11 0
SC10	UIPC $\frac{1}{2}$ "	Special Slow Speed	11 $\frac{3}{4}$	330	$\frac{1}{2}$ "	$\frac{3}{4}$ "	$\frac{3}{8}$ "		f£13 13 0



SC12



SC14

SC12 Bench Drilling Stand for SC4-SC10 of very robust construction, with a generous allowance of metal in all parts. It will give many years of good service. The tool is lowered into the tool holder and secured by one locking screw, making the whole a rigid self-contained tool with sliding column and head, lever feed and depth drilling stop, with base table tapped for work to be secured and guttered for suds. Suitable for Types U1P $\frac{1}{4}$ ", U1P $\frac{5}{16}$ ", U1P $\frac{3}{8}$ ", U1PC $\frac{1}{2}$ " f£4 4 0

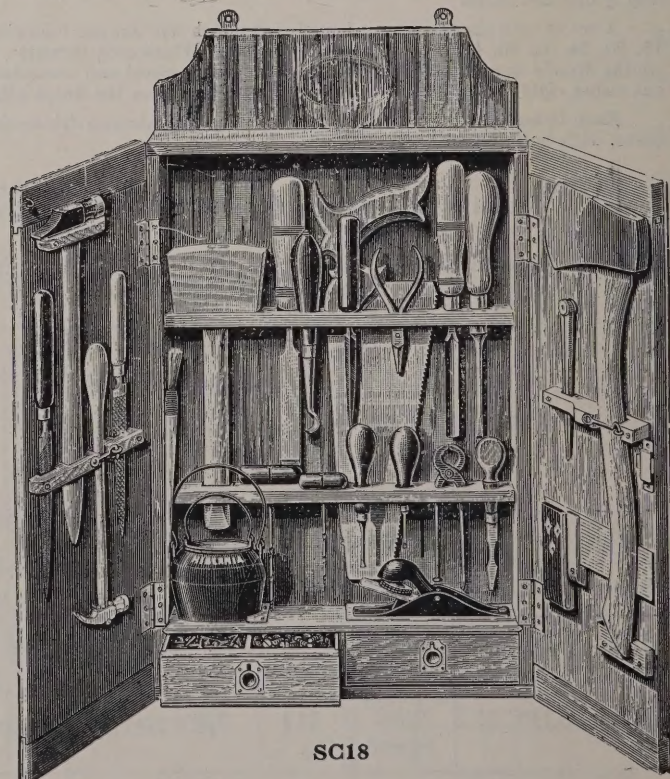
SC14 Workshop Bench, single carpenter's; this bench can be supplied in various sizes. Prices from f£6 0 0
Prices and particulars of other laboratory drills, benches, etc. on application.

SC16 Polished Tool Cabinets of Oak (similar to Fig. SC18), containing 2 hammers, hatchet, mallet, hand saw, pincers, pliers, 2-ft. rule, square, spokeshave, plane, 2 gimlets, 2 bradawls, compasses, 2 turnscrews, tack-claw, cold chisel, brad punch, 2 files, rasp, 2 chisels, gouge, oil stone, oil can, glue pot and brush, nails, etc. d£4 15 0

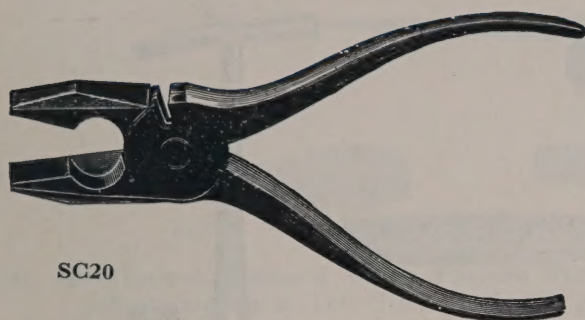
SC18 Tool Cabinets of Oak, containing 2 hammers, mallet, hatchet, hand saw, tenon saw, saw-pad and saw, hand vice, pincers, cutting pliers, 2-ft. rule, bevel, square, spokeshave, smoothing-plane, 4 gimlets, 4 bradawls, compasses, 2 turnscrews, 2 files, rasp, 4 chisels, 2 gouges, 2 brad punches, striking knife, drawing knife, brace and bits, scraper, movable spanner, spirit level, oil stone, oil can, glue pot and brush, nails, etc. d£7 16 0

Any item in above set sold separately.

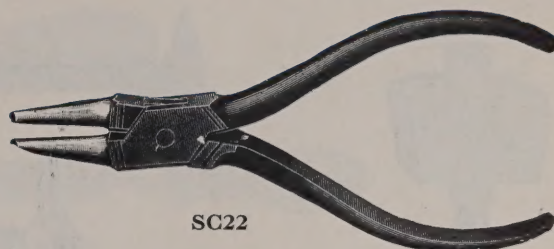
Page 88



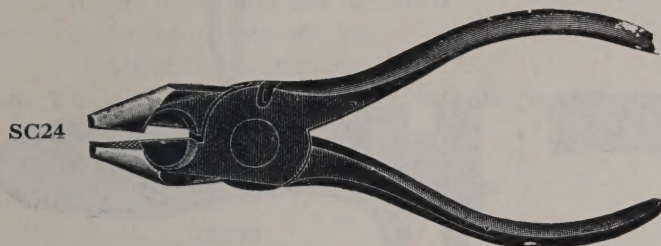
SC18



SC20



SC22



SC24



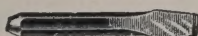
SC30



SC32

SC20	Pliers with cutting edges, square noses, 5"	....	....	....	....	....	e £0 2 0
SC22	Pliers without cutting edges, straight noses, 4"	....	....	....	....	....	e £0 1 6
SC24	Pliers, steel, with cutting edge, half-round noses, 5"	....	....	....	....	....	e £0 2 6
SC26	Pliers, with insulated handles, best Lancashire make, 6"	....	....	....	....	....	e £0 3 6
*SC28	Pliers, with parallel jaws, nickel-plated, 5 1/2"	....	....	....	....	....	e £0 6 3
SC30	Shears for cutting metal. Length	....	6	7	8 in.	....	....
	Price	....	e 2/-	e 2/6	e 3/- each.	....	....
SC32	Pincers or Cutting Nippers, 6"	....	....	....	....	....	e £0 2 6

SC34



SC36

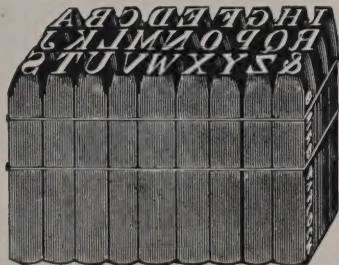


SC34	Chisels for cutting metal	....	6 x 1/2	7 x 5/8	8 x 3/4 in.	....	....
	Price	....	e 9d.	e 1/-	e 1/6 each.	....	....
SC36	Screwdrivers	....	3	4	6	8 in. blade.	....
	Price	....	e 1/-	e 1/3	e 1/9	e 2/3 each.	....
*SC38	Set of Instrument Maker's Screwdrivers, Boley pattern, with three spare blades in handle, all metal, 4"	....	....	....	....	....	d £0 1 9
*SC40	Set of 6 Boley Pattern Watchmaker's Screwdrivers	....	....	....	....	....	d £0 6 0

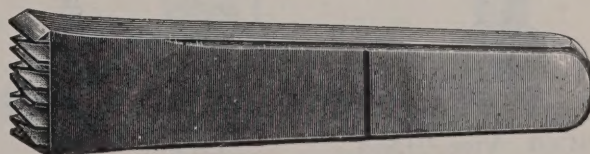
(Sizes can be sold separately if required.)



SC42



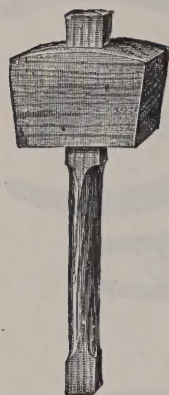
SC44



SC46

Punches, well-tempered strong cast-steel, for stamping bullion.

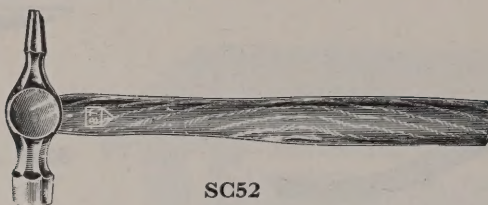
SC42	Set of figures, 0 to 9	e 3/3	e 3/3	e 4/-	e 4/6	e 7/6	e 9/-	e 15/- per set.
SC44	Set of alphabet, A to Z	e 10/-	e 10/-	e 13/6	e 15/-	e 27/6	e 33/-	e 40/- "
SC46	Punches, made to order, best extra strong steel, over three letters.	....	....	....	....	....	....	....
	Per letter	e 1/3	e 1/2	e 1/-	e 10d.	e 8d.	e 8d.	e 8d.



SC48



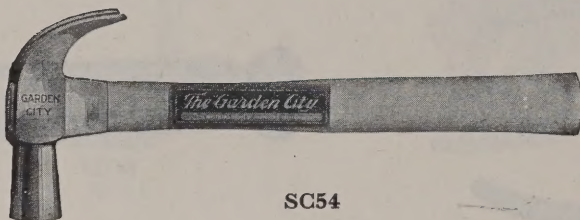
SC50



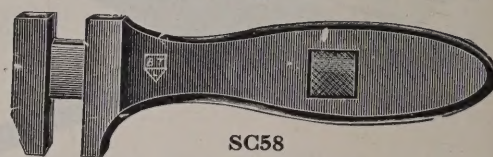
SC52



SC56

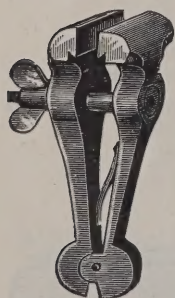


SC54

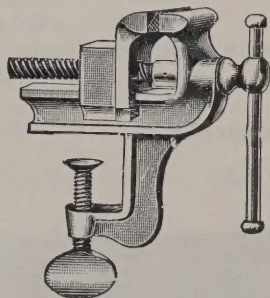


SC58

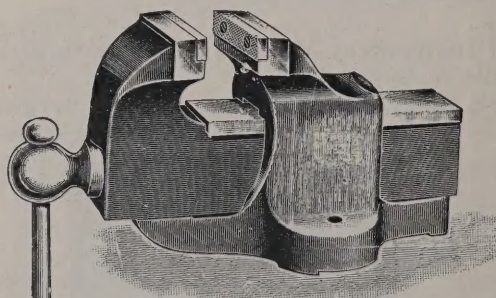
SC48	Mallets, beech, morticed	....	....	....	5	7 in.	
				Price	£ 2/6	£ 4/6 each.	
SC50	Hammers, flat one end, pointed the other, handled	....	....	....	3	4 in. long.	
				Price	£ 3/6	£ 4/6 each.	
SC52	Hammer, chisel end, handled	....	....	....	10 oz.	12 oz.	16 oz.
				Price	£ 1/6	£ 1/9	£ 2/3 each.
SC54	Hammer, claw, 13 oz.	....	....	....	....	....	....
							£ 0 5 6
SC56	Hammer, claw, small light	....	....	....	....	....	....
							£ 0 3 6
SC58	Spanner or adjustable wrench	....	....	....	3	4	6 in.
				Price	£ 2/6	£ 3/-	£ 4/6



SC60



SC62



SC64

SC60	Vice, Hand,	Length	3 in.	4 in.	5 in	6 in.	
		Price	£ 3/-	£ 3/6	£ 6	£ 7/6	
SC62	Vice to screw to table, weight	....	....	....	2 lbs.	3 lbs.	
				Price	£ 10/-	£ 12/-	
SC64	(A) Vice, Strong Parallel Jaws,	2½ in., open to 3 in., weight about 7 lb.	....	....	£ 0 12 0		
	(B) " " " "	3½ in., open to 4½ in., weight about 20 lb.	....	....	£ 0 19 6		
	(C) " " " "	4½ in., open to 5½ in., weight about 40 lb.	....	....	£ 1 13 0		



SC70



SC74



SC78

SC66 Instrument Maker's Swiss Pattern Files, very useful for repairs or alterations to delicate apparatus, best British make, $4\frac{1}{2}$ " long, assorted shapes.

A. Set of 10, very fine cut, 00-0	....	....	....	....	Per set	c £0 14 3
B. Set of 10, fine cut, 1-2	....	....	....	....	..	c £0 15 0
C. Set of 10, medium cut, 3-4	....	....	....	....	..	c £0 15 9

SC68 Files, round, best Lancashire, for enlarging holes in corks

5	6 in.
c 8d.	c 10d. each.
c 7/6	c 9/- per doz.
5	6 in.
c 11d.	c 1/1 each.
c 10/3	c 11/9 per doz.

SC70 Files, round, as above, **with handles**

5	6 in.
c 11d.	c 1/1 each.
c 10/3	c 11/9 per doz.

SC72 Files, triangular, best Lancashire cross-cut, $3\frac{1}{2}$ in.

each, 7d.; per doz. c £0 6 9

SC74 Files, triangular, as above, **with handles**, $3\frac{1}{2}$ in.

.. 10d.; .. c £0 9 6

SC76 Files, flat, best Sheffield

6	7	8	10 in.
Price	c 1/1	c 1/3	c 1/5
			c 1/6 each.

SC78 Files, flat, as above, **with handles**

6	7	8	10 in.
Price	c 1/4	c 1/6	c 1/8
			c 1/9 each.

SC80 Handles, wooden, for files, with brass ferrules, to suit Nos. SC68 and SC 72

each, 3d.; per doz. c £0 2 9

SC82 Copper Sheet (any gauge cut to order)

According to market rates, per lb. e £0 1 3

SC84 Brass Sheet (any gauge cut to order)

.. .. e £0 1 3

SC86 Zinc Sheet (any gauge cut to order)

.. .. e £0 1 0

SC88 Aluminium Sheets (any gauge cut to order)

.. .. e £0 4 6

SC90 Iron Sheet (any gauge cut to order)

.. .. e £0 0 9

SC92 Tinned Iron Sheet (any gauge cut to order)

.. .. e £0 0 10

SC94 Lead Sheet (any gauge cut to order)

.. .. e £0 1 3

SC96 Window Glass, 12 x 6 in.

per doz. sheets e £0 5 0

SC98 Cardboard, sheets about 30 x 20 in.

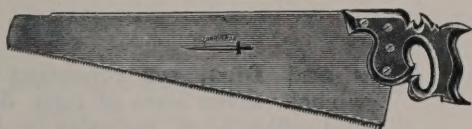
.. .. e £0 12 0

SC100 Clock Springs, various sizes

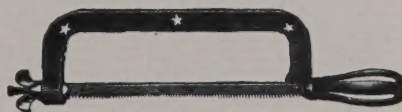
.... each e £0 1 6

SC102 Cord, for pulleys, etc.

.... per hank e £0 0 6



SC104-SC106



SC109

SC104 Hand Saw, best cast-steel

16	18	20	24 in.
Price	e 5/-	e 5/9	e 6/3
			e 8/6 each.

SC106 Hand Saw, medium quality

16	18	20	24 in.
Price	e 4/6	e 5/-	e 5/7
			e 7/- each.

***SC108 Hack Saw Frames**, 8 in.

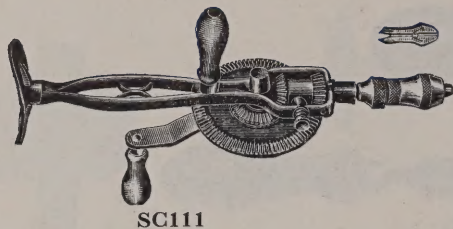
.... each e £0 2 6

SC109 Hack Saw, with adjustable frame, 8 to 12 in.

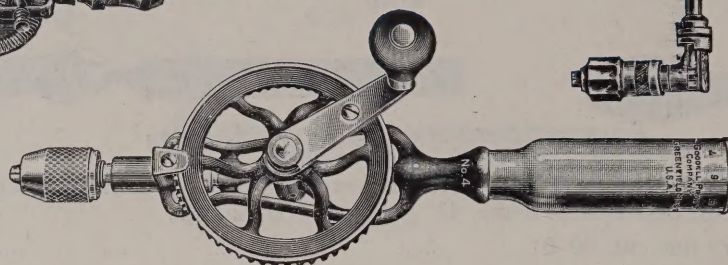
.... .. e £0 4 6

SC110 Blades for ditto.

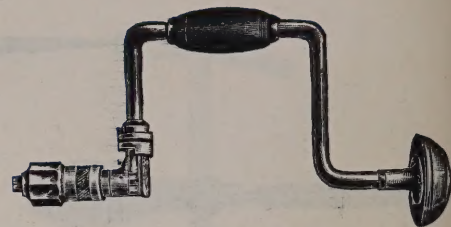
.... per doz. e £0 3 0



SC111



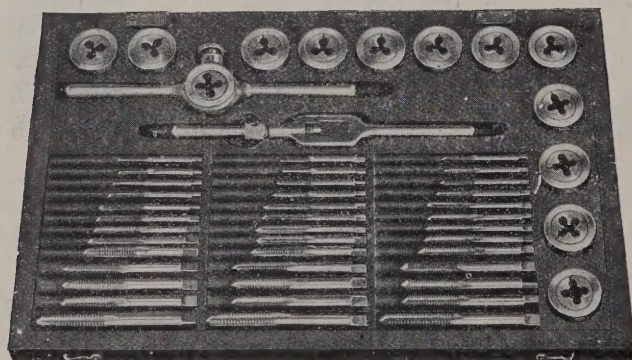
SC114



SC118

- *SC111 Breast Drill, No. 1, a low priced drill of sound construction, 3-jaw chuck, capacity 0- $\frac{1}{2}$ " round shanks, two speeds, adjustable breastplate, length 15 $\frac{5}{8}$ in., weight 5 $\frac{1}{4}$ lbs. e £0 14 6
- *SC112 Ditto, No. 2, most popular model, 2-jaw master chuck, capacity $\frac{1}{8}$ "- $\frac{1}{2}$ " round shanks, bitstock shanks and No. 1 Morse taper shanks, two speeds, adjustable breastplate, patent level attachment, length 17 $\frac{1}{2}$ in., weight 6 $\frac{1}{2}$ lbs. e £1 5 6
- *SC113 Ditto, No. 3, this drill answers every purpose for all ordinary drilling, crank handle may be turned straight for greater power, auxiliary breastplate, 3-jaw chuck, 0- $\frac{1}{2}$ " capacity, two speeds, length 18 in., weight 7 lbs. e £1 16 6
- *SC114 Hand Drill e £0 10 0
- *SC116 Sets of Morse Drills, carbon steel, straight shank, suitable for hand and breast drills, mounted in sets on block
- A. $\frac{1}{16}$ in. to $\frac{1}{2}$ in. by 32nds e £1 19 6
- B. 1 mm. to 13 mm. by $\frac{1}{2}$ mm. e £2 16 0
- *SC118 Brace, carpenter's, with ratchet Size 8 10 in.
Price e 15/- e 18/6 each.
- SC120 Centre Bits to suit above $\frac{3}{8}$ $\frac{1}{2}$ $\frac{5}{8}$ $\frac{3}{4}$ $\frac{7}{8}$ 1 in.
e 7d. e 8d. e 9d. e 10d. e 11d. e 1/- each.

Prices and quotations given for all other types and patterns of wood and metal-working tools.

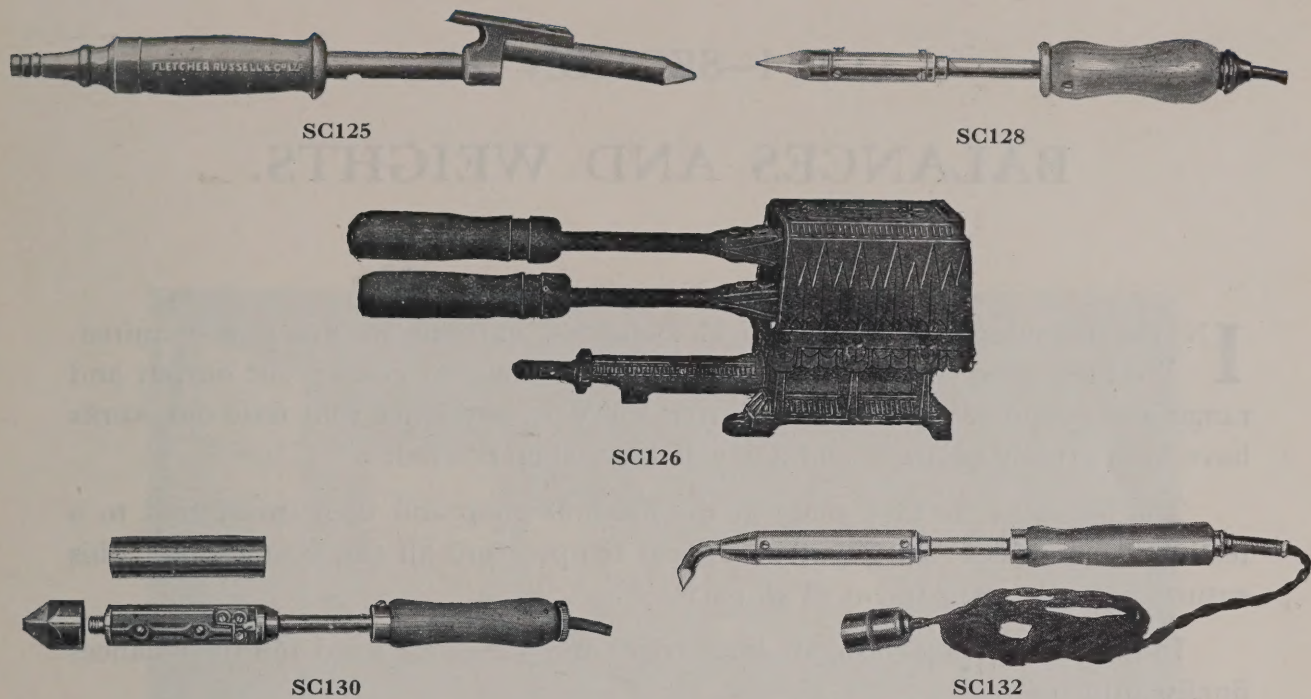


SC122

Taps and Dies, set consisting of wrench, seven sizes of taps, dies and collets $\frac{1}{16}$ "- $\frac{1}{4}$ ", inclusive by $\frac{1}{32}$ ", in wood case with cover.

Whitworth thread.

- *SC122 Price with second taps e £2 5 6
- *SC123 Price with taper and second taps e £2 13 6
- *SC124 Price with taper, second and bottoming taps e £3 1 0



SC125 Fletcher's Registered Self-Heating Soldering Bit e £0 12 3

This is free from smell, heats rapidly, and will be found a first-class arrangement for case-makers, glass leading, box making, and similar work. It is not suited for the heaviest class of coppersmith's work. The copper can be renewed in a minute when worn down. The gas supply from an ordinary bracket, with the gas burner removed, will be found ample.

SC126 Fletcher's Burner, with hood for heating soldering bits. Price without bits e £0 7 6
 This will heat one bit and keep another nearly ready for use, so that two can be used in succession.

Electric Soldering Irons, for general use, complete with earthing terminal.

	Consumption.	Size.	Weight with Flex.	Price, each.	Spares.	
					Replace Element.	Spare Straight Bits
SC128	Watts. 60	ins. $\frac{7}{8}$ dia. $\times$ $13\frac{1}{4}$	lbs. oz. 1 2	e £1 7 0	e £0 12 6	e £0 2 0
SC130	175	$1\frac{3}{16}$ dia. $\times$ $14\frac{1}{2}$	2 2	e £2 0 0	e £0 5 0	e £0 5 0

SC132 Electric Soldering Irons, as illustrated, complete with six feet of Flex and "Bakelite" Adapter Price each e £0 10 6

SC133 Spare Elements for above " " e £0 1 6

This model weighs $\frac{3}{4}$ lb. and has a loading capacity of 90 watts.

Please state voltage when ordering.

VOL. I—SECTION II b.

BALANCES AND WEIGHTS.

IN the manufacture of Analytical Balances, extreme accuracy is required. We have been manufacturing balances for some 20 years; our output and range was considerably increased during the War, and since that date our works have been greatly enlarged and a new balance shop erected.

The balances are first made in the machine shop and then transferred to a testing room, which is kept at a uniform temperature all the year round; this ensures accurate adjustment of all parts.

In the testing shop the agate knife edges and planes are fixed and the balances finally adjusted.

NOTE.—To obtain the ideal working conditions and to use the balance at its maximum sensitivity, all balances should be kept on a vibrationless level surface, protected from sunlight, draught, acid and other fumes, etc.

Full instructions for erection, assembling and adjusting are sent with all balances. Below is an extract from the instructions sent out with B.T.L. Chemical Balances.

UNPACKING INSTRUCTIONS.

The balance as despatched has the pillar fixed in position and the beam, stirrups and other small fittings packed in a separate cardboard box. In the case of a balance provided with drawer, these fittings will be found inside the drawer. Carefully remove the parts from the box or drawer and the packing from inside the case, then place the packing material aside until the balance has been completely assembled and adjusted. The hangers, lifting handle and small fittings are wrapped together in a parcel, and the pointer tied up with the beam. If the balance is fitted with a rider arrangement, the sliding arm and rider rod will also be found inside the box. Before proceeding to erect the balance, clean the case and remove any loose pieces of packing that may be wedged in the framework, also wipe over all metal parts with a soft dry chamois leather, and gently rub the agate knife edges and planes until they are quite clean and free from dust and moisture.

B.T.L. British Balances, Nos. SC200—SC256.

Oertling's „ Nos. SC260—SC279.

Foreign Balances, Nos. SC370—SC390.

British Weights, Nos. SC402—SC548.



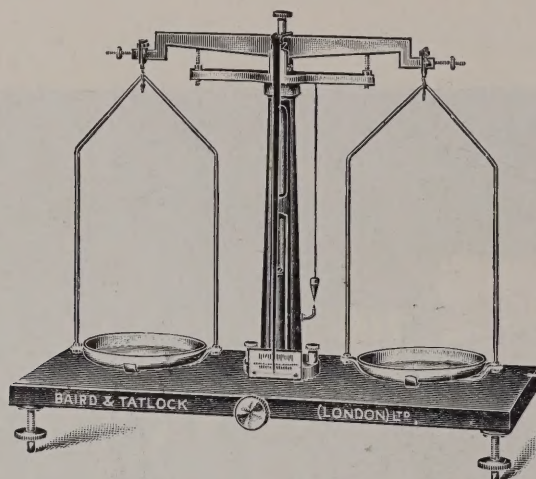
BALANCE SHOP.

B.T.L. WORKS, HIGHAM LODGE, WALTHAMSTOW.

The photograph shows the machine shop with the assembling and adjusting rooms beyond. The temperature of these rooms is controlled to assure accuracy of adjustment.

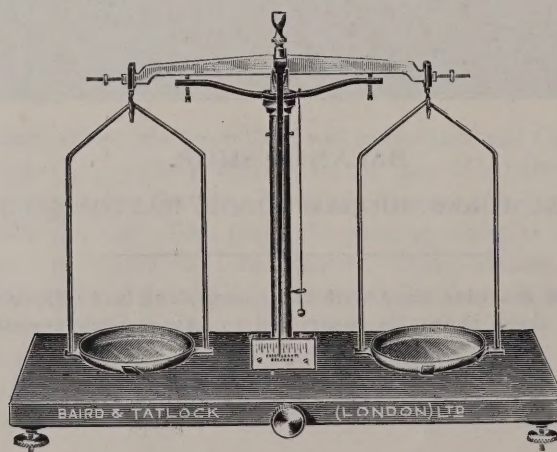
B.T.L. Balances.

MADE AT OUR SCIENTIFIC INSTRUMENT WORKS AT WALTHAMSTOW.



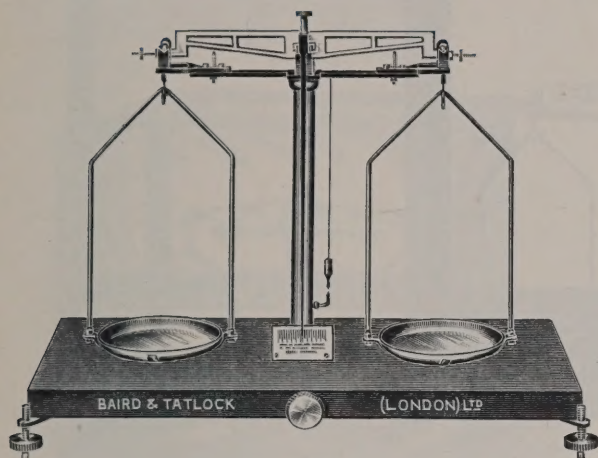
SC200

SC200 Balance, Physical or Chemical, 250 grammes capacity, weighing to 2 mg., agate knife edges and planes, solid beam and aluminium pillar on polished hard-wood sole, hangers have double hooks for taking specific gravities. An inexpensive, durable balance, suitable for students e £1 12 6

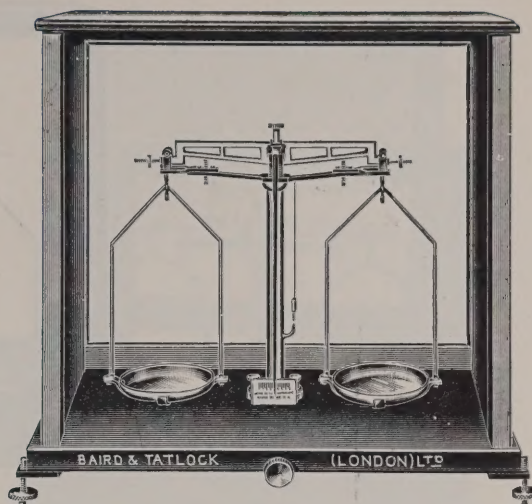


SC202

SC202 B.P. Balance, Physical or Chemical, capacity 100 grammes in each pan, weighing to 1-2 milligrammes, agate knife edges and planes, plumb bob, levelling screws, on hard-wood sole. Solid brass beam, 8.5 cm. pans, all steel screws of stainless steel each e £2 2 0



SC204



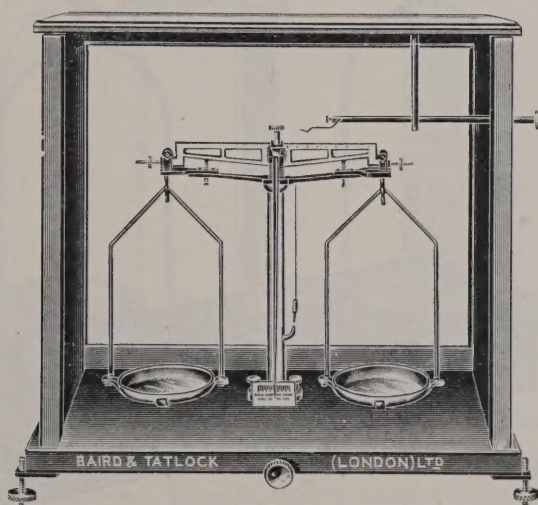
SC206

SC204 B.B. Balance, open beam, agate knife edges and planes, front movement, plumb level, on sole with levelling screws, all steel screws of stainless steel.

Capacity	....	100	250	500	1000 grammes.
Sensitivity	....	2	2	5	10 milligrammes.
Diameter of Pans	....	8	10	12	15 c.m.
Price	....	e £2 15 0	e £2 17 6	e £4 10 0	e £5 5 0

SC206 B.B. Balance, as above, fitted into polished mahogany case with sliding door.

Capacity	....	100	250	500	1000 grammes.
Price	....	e £4 5 0	e £4 12 6	e £6 17 6	e £8 5 0



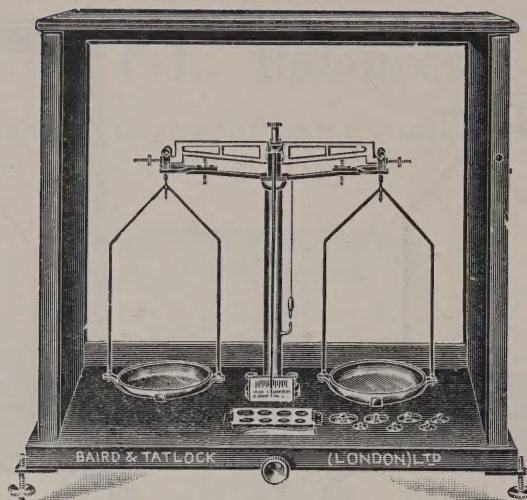
SC212

SC208 B.B. Balance, as SC204, but with divided beam graduated to read to 1 milligramme.

Capacity	....	....	....	100	250 grammes.
Price	....	....	....	e £3 5 0	e £3 7 6

SC212 B.B. Balance, as SC208, but fitted into case with sliding door, and provided with rider attachment.

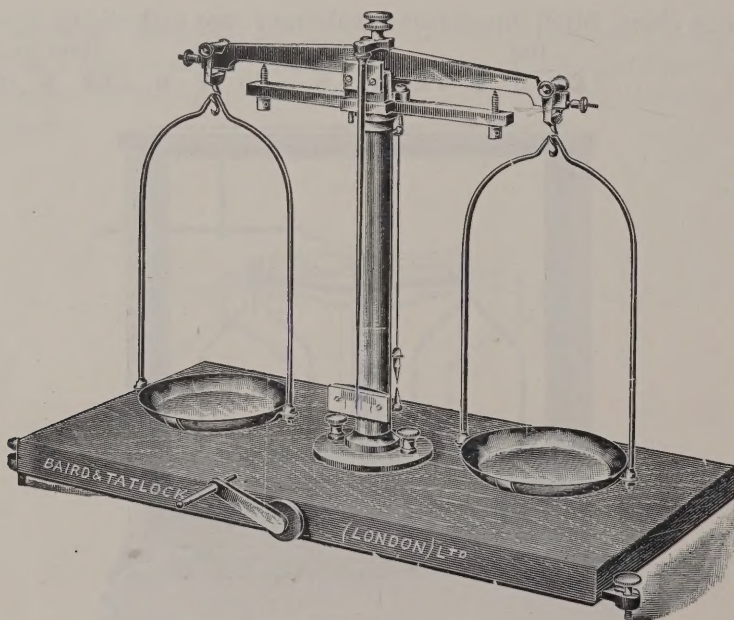
Capacity	....	....	....	100	250 grammes.
Price	....	....	....	e £4 17 6	e £5 0 0



SC213

SC213 Balance, as SC204, 250 grammes weighing to 2 mg. Agate knife edges and planes, in mahogany case with sliding doors, as supplied to Marlborough College. The brass weights are accommodated in a series of holes bored in the baseplate, and the fractions in an opal glass plate with depressions. A slot is provided for the forceps. Price, including a set of B.T.L. Weights 200 grammes to .001 grm.

£5 5 0

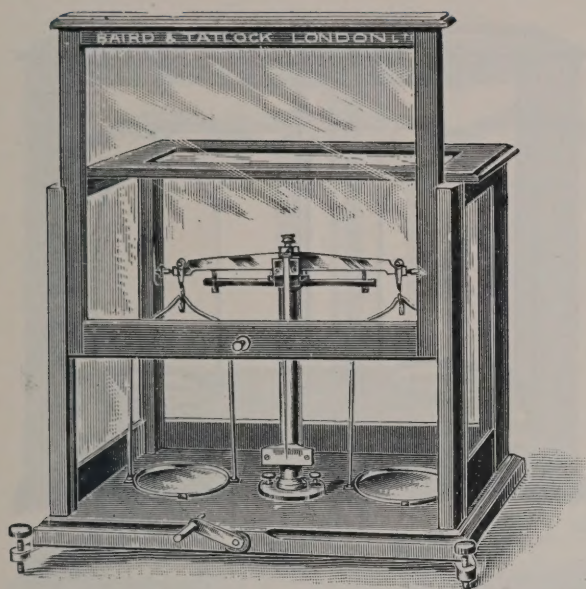


SC214

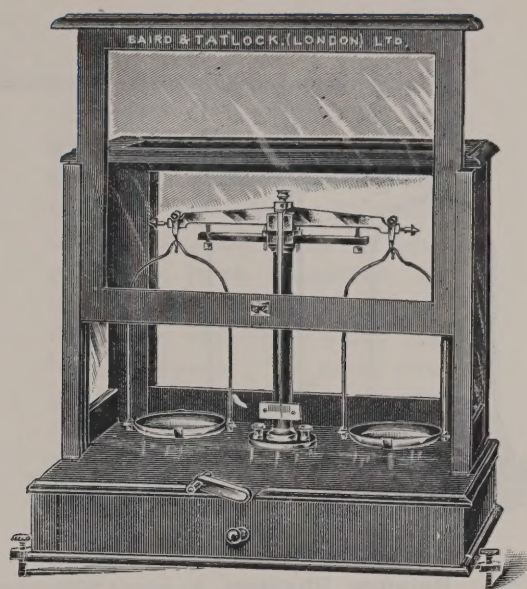
SC214 Balance, Student's

£3 15 0

This balance has been devised to meet the demand for a cheap and accurate balance suitable for students' work. It is thoroughly well made, **all knife edges and planes being of agate**; carrying a load of 100 grammes in each pan, **it is sensitive to 0.5 milligramme**; all steel screws made of stainless steel. It is fitted with beam support, double hooks for taking specific gravities, and plummet. Pans $8\frac{1}{2}$ centimetres diameter, mounted on polished sole with levelling screws.



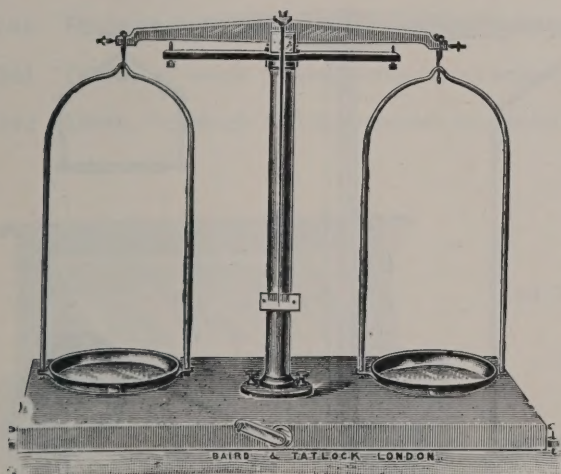
SC216



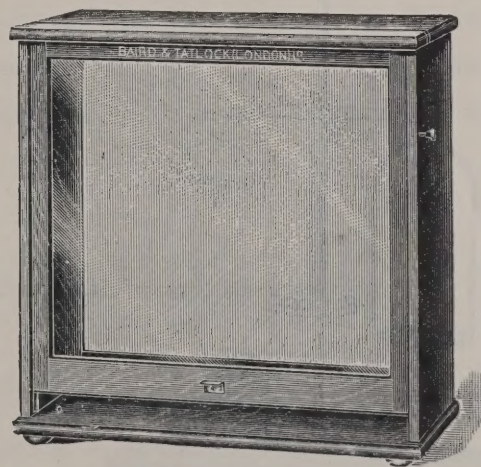
SC218

SC216 Balance, Student's, as SC214, mounted in waxed teak glass case with counterpoised sliding front, all steel screws of stainless steel e£5 10 0

SC218 Balance, similar to above, but in case fitted with drawer e£6 5 0



SC222



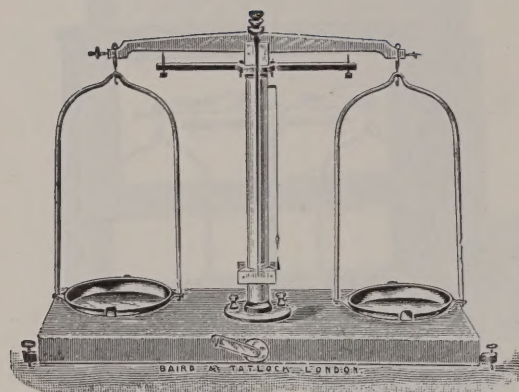
SC224

SC222 Physical Balances, solidly constructed, with agate knife edges on agate planes, levelling screws and plummet, beam support, double hooks for suspension, on polished mahogany sole.

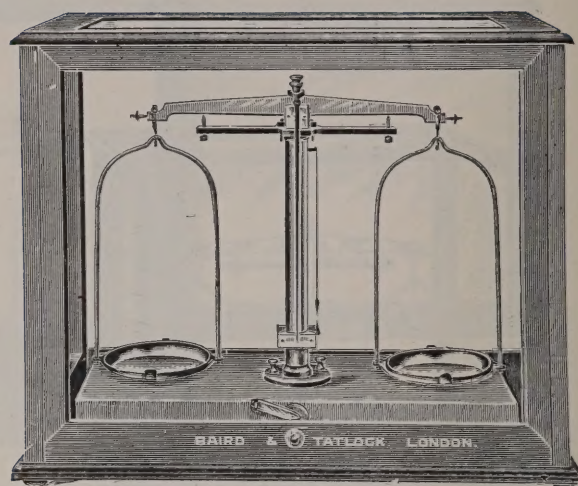
To carry	....	100	250	500	1000 grammes.
Sensitive to	....	2	2	5	10 milligrammes.
Diameter of Pans	....	8	10	12	15 centimetres.
Price	....	e£2 15 0	e£2 17 6	e£4 10 0	e£5 17 6

SC224 Balance Cases, suitable for above balances, strongly made of polished wood with glass front and back and sliding doors with patent spring catch.

To suit	....	100	250	500	1000 grammes.
Price	....	e£1 10 0	e£1 13 0	e£1 17 6	e£3 0 0

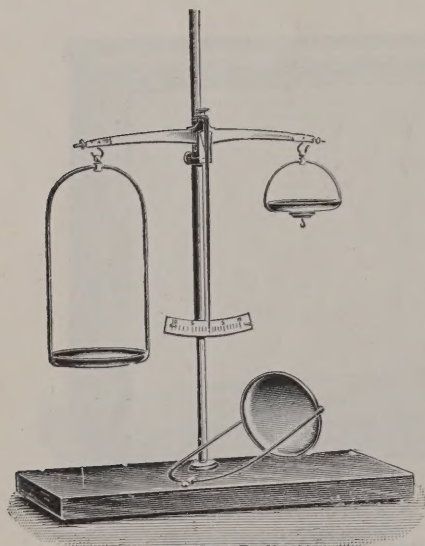


SC226

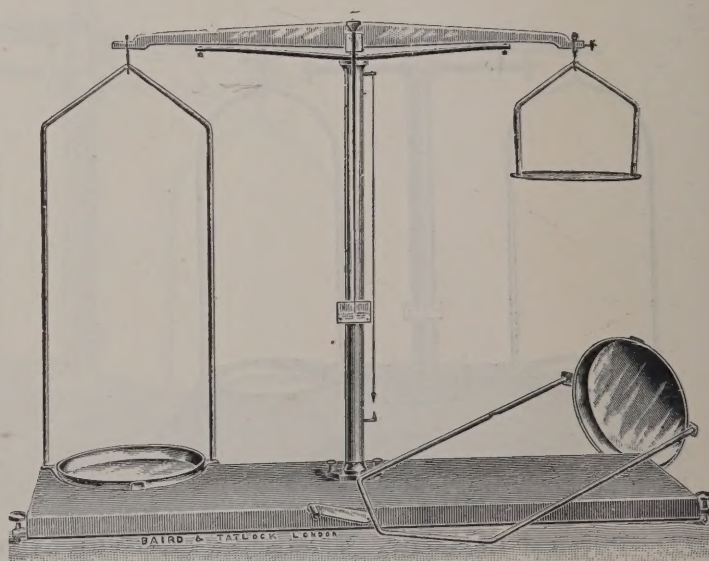


SC228

- SC226 Balance, Physical**, to carry 250 grammes, and sensitive to 2 milligrammes, agate knife edges working on agate planes, with plummet, on wooden sole with levelling screws, double pointer, and indices back and front for class demonstration e £4 2 6
- SC228 Balance, Physical**, same as SC226, but fitted in glass case with sliding door e £5 12 6

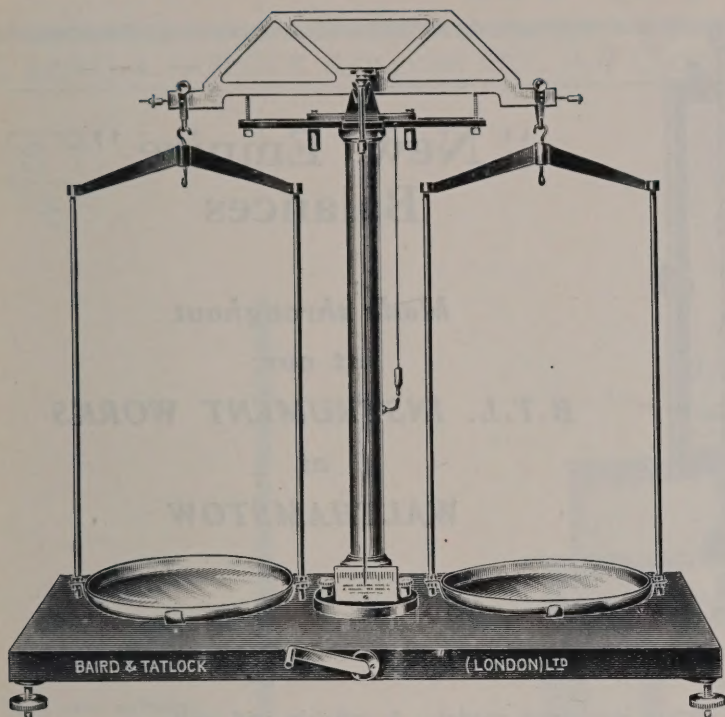


SC232



SC233

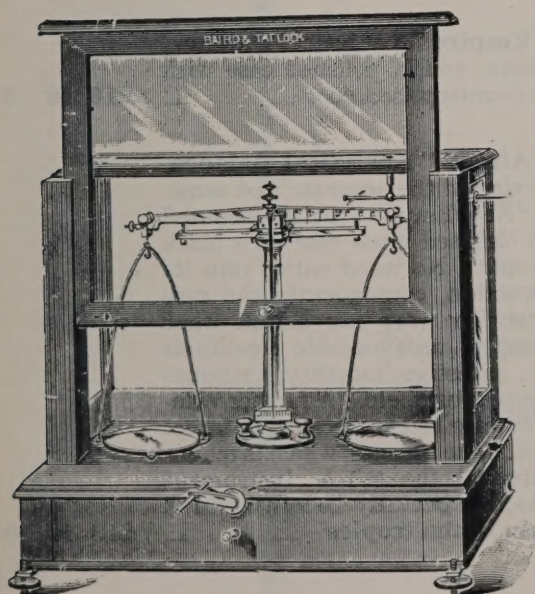
- SC232 Balance, Students'**, for physical experiments. Pillar 20 in. high, beam 10 in. long, pans 10 cm. diameter, specific gravity pan, on polished wooden sole e £1 8 6
- SC233 Lecture Balance**, to carry 1 kilo in each pan, steel knife edges on agate planes, movable pans 15 cm. diameter, and extra pan with hook at base for specific gravity, provided with levelling screws and plummet, on polished mahogany sole e £5 10 0
- SC234 Balance Case** for above, polished wood with glass back and front, sliding door and spring catch e £3 0 0



SC239-SC242

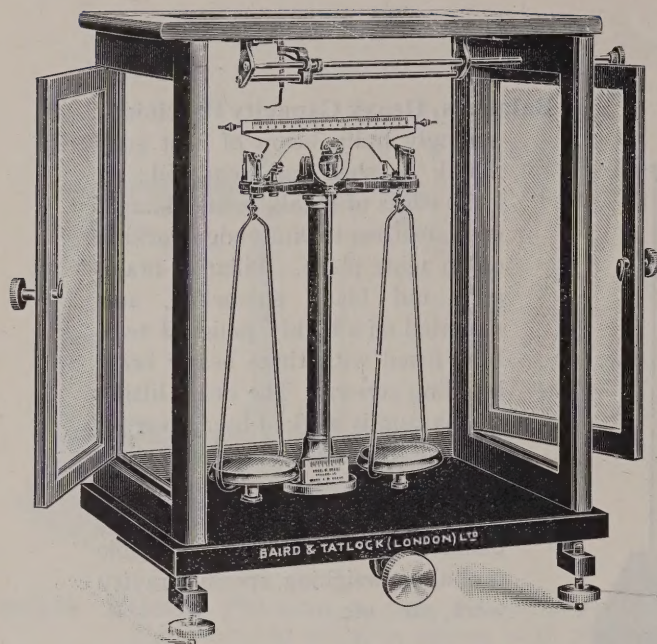
Balances, Heavy Capacity Precision, strongly built, beam of best gun-metal, polished and lacquered; all knife edges of highly polished hardened steel, centre knife edge working on an agate plane. Pillar of brass, gold and black enamelled, and mounted on a highly polished teak base fitted with three heavy brass levelling screws. The beam lifting mechanism is worked by a lever on front of the sole; beam rests are fitted to take weight of beam off knife edges when not in use. These balances are particularly suitable for bullion weighing, specific gravity work, etc., etc.

SC239	Balance, to weigh 1 kilogramme and sensitive to 10 milligrammes	....	....	....	£5 10 0
SC240	Ditto, to weigh 3 kilogrammes and sensitive to 20 milligrammes	....	....	....	£6 10 0
SC241	Ditto, to weigh 5 kilogrammes and sensitive to 30 milligrammes	....	....	....	£7 10 0
SC242	Ditto, to weigh 10 kilogrammes and sensitive to 50 milligrammes	....	....	....	£9 0 0



SC244

SC244	Balance, Chemical, to carry 100 grammes, sensitive to $\frac{1}{2}$ milligramme, in waxed teak glass case with drawer, brass levelling screws and plummet, all knife edges and planes of agate, no steel or iron used in construction except screws all made of stainless steel. The beam is divided and case fitted with rider apparatus. Brass pans 10 centimetres diameter, double hook for taking specific gravity, and with specific gravity table. In case with drawer	....	....	....	£7 7 0
SC245	Balance, as above. In case without drawer	....	....	....	£6 12 0



SC246

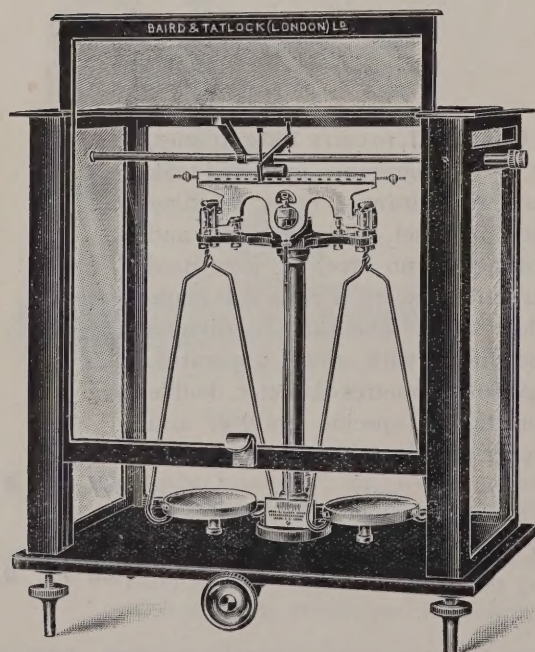
SC246 "New Empire" Analytical Balance, latest improved model. A reliable and well-constructed balance of guaranteed accuracy.

SPECIFICATION.

Short Beam Balance to carry 200 grms., sensitive to 0.1 milligramme, beam $13\frac{1}{2}$ cm. long, of aluminium alloy, fitted with agate knife edges working on agate planes. Rider traverses the whole length of beam, and adjustable supports for the nickel-plated pans are provided.

The balance is fitted in teak case with black glass sole and has front sliding door secured with catch, two side doors, levelling screws and plummet. All steel screws of stainless steel

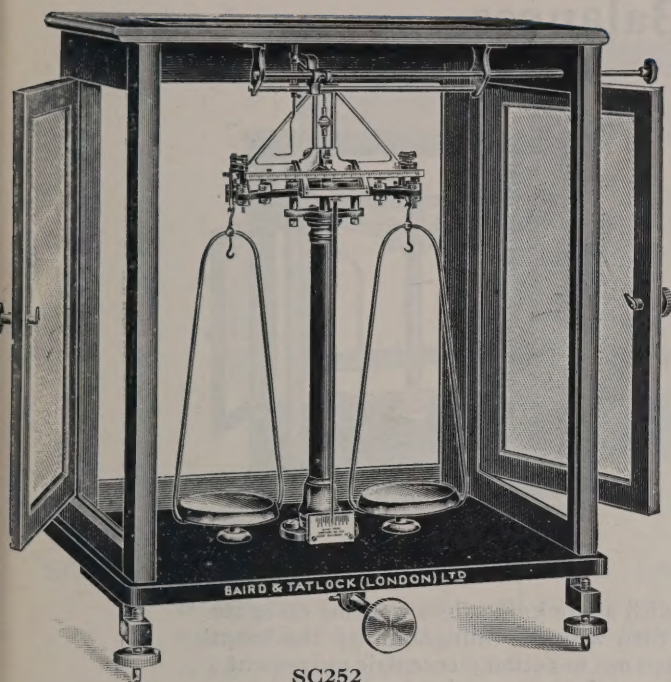
Price f £10 0 0



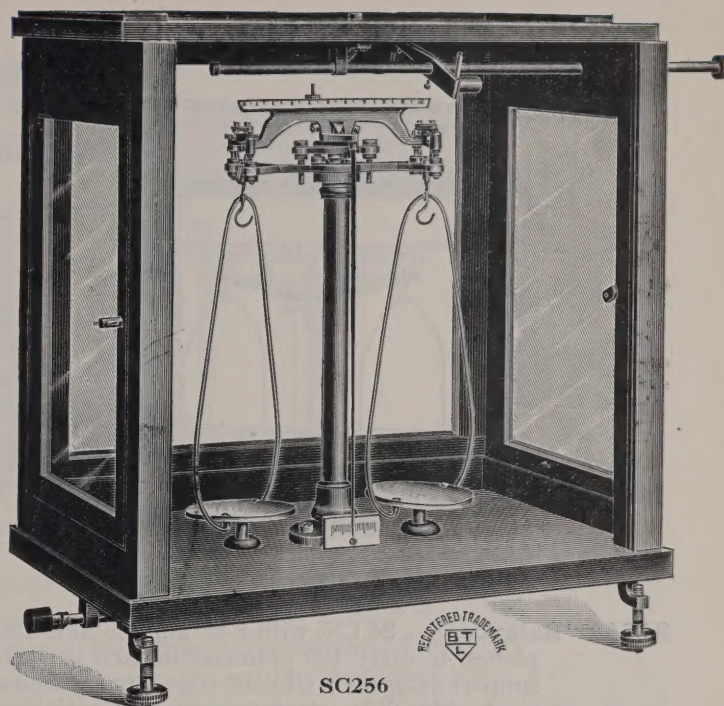
SC248

SC247 "New Empire" Analytical Balance, as above, but in polished case with front counterpoised door f £10 10 0

SC248 The "Almet" Analytical Balance, consisting of the accurate and sensitive "New Empire" balance housed in an oxidised brass case on a black glass sole. No wood enters into its construction, consequently the case will neither warp nor shrink when exposed to unfavourable conditions—e.g., excessive humidity, extremes of temperature, etc. A further valuable feature is its resistance to insect attack. The balance, which is manufactured at the B.T.L. Instrument Works, is specially recommended for use in the tropics f £13 10 0



SC252



SC256

SC252 A.A. Balance, short beam to carry 100 grammes in each pan, sensitive to 0.1 milligramme, gun-metal beam 14 cm. long with rider scale divided in tenths, nickel-plated pans 7 cm. diameter, compensating hangers, all bearings, planes and knife edges of agate, mounted on heavy black plate-glass sole with levelling screws and plummet and fitted in polished mahogany case with front sliding door, and two side doors. Adjustable pan rests and improved rider apparatus d £20 0 0

SC254 "Walcross" Balance, short beam of gun-metal 15 cm. long, knife edges and planes of agate, with compensating hangers, to carry 200 grammes in each pan, sensitive to 0.2 milligramme. Nickel-plated pans, 8 cm. diameter, new improved rider apparatus, with rider scale divided into fifths, mounted on heavy black plate-glass sole with adjustable pan rests, oak case, glazed, with front counterpoised door, levelling screws and plummet, descending beam support Price c £15 10 0

SC256 B.T.L. Balance, Analytical and Precision, to carry up to 200 grammes and sensitive to 0.1 milligramme. Beam, 13 centimetres long, of gun-metal gilt, with round pointer. In place of a rider scale, the beam itself is divided and graduated in 100 divisions, so that moving a 5-milligramme rider the full length of the beam will cause an alteration of the equilibrium of the balance by one centigramme. In this way milligramme weights are not required, one notch corresponding to every 0.1 milligramme and every ten notches to one milligramme. The time of oscillation, with a medium load, is only 9 seconds, this being the shortest time in which the oscillations can be read off with certainty. Owing to the low situation of the centre of gravity, the sensitiveness is the same for any load. The knife edges and planes, as well as all contact of the beam and pan suspensions, are of agate. The balance is mounted on black plate-glass sole with levelling screws, and is provided with doors opening on all sides d £25 0 0

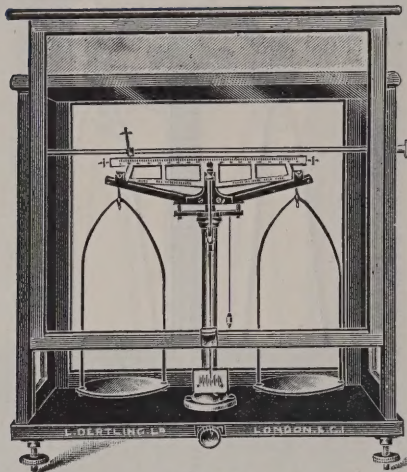
Special features : Gold-plated Beam.

Pans and Stirrups of hard silver alloy.

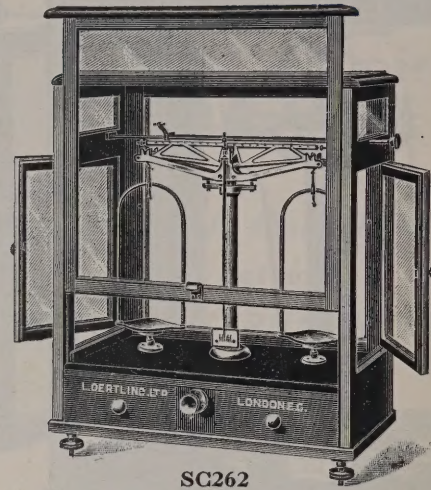
Gearing to lift Beam totally enclosed.

All Steel Screws of Stainless Steel.

Oertling's Balances.



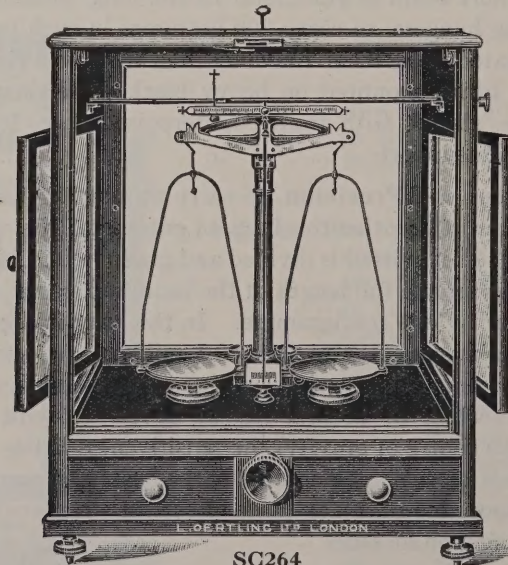
SC260



SC262

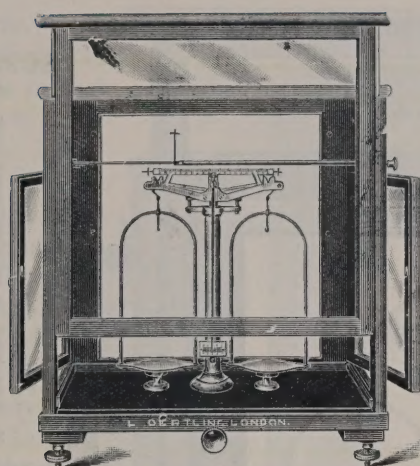
SC260 Balance, No. 24 CN, with 8 in. gun-metal beam, with agate knife edges working on agate planes, to carry 100 grammes in each pan and turn with 0.2 milligramme ; the beam support descends ; all knife edges are relieved when not in action ; eccentric movement ; single rider slide, which traverses the entire length of the beam ; circular concave pans, $3\frac{1}{2}$ in. between wires ; polished mahogany glass case with counterpoised front slide and levelling screws £16 16 0

SC262 Balance, No. 1 SB, with 8 in. (20 cm.) beam to carry 100 grammes in each pan, and turn with 0.1 milligramme ; the beam is constructed with agate knife edges working on agate planes, and divided for the use of the rider ; rider slide which traverses the entire length of the beam ; pan supports ; polished mahogany glass case with counterpoise weights fitted to front slide and plate glass to bottom of case £33 10 0



SC264

SC264 Balance, No. 2SB, with 6 in. (15.2 cm.) beam to carry 200 grammes in each pan, and turn with 0.1 milligramme ; agate knife edges working on agate planes ; rider slide which traverses the entire length of the beam ; plate glass to bottom of case ; pan supports ; polished mahogany glass case with counterpoise weights fitted to front slide £45 0 0



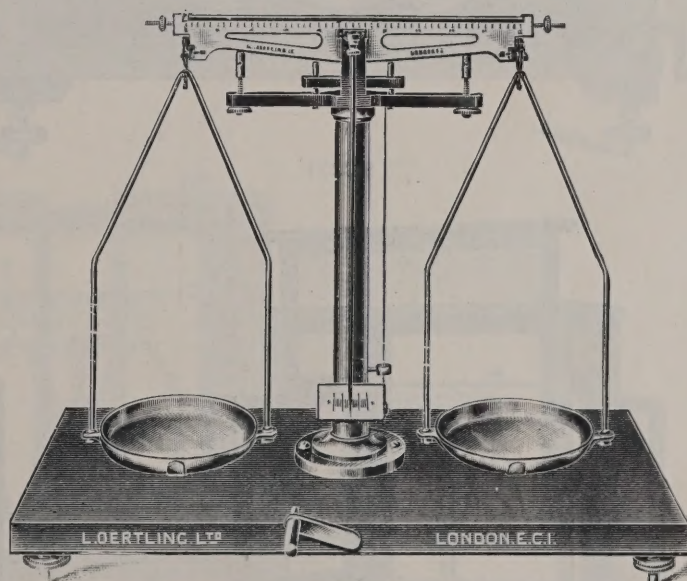
SC265

SC265 Balance, No. 7 SB, with 6 in. (15.2 cm.) horizontal beam divided into 100 parts, to carry 200 grammes in each pan, and turn with 0.1 milligramme ; the beam is constructed with agate knife edges working on agate planes, single rider slide traversing total length of beam ; pan supports ; black plate glass base to bottom of case ; polished mahogany glass case fitted with counterpoise weights to front slide, levelling screws and plummet **£26 5 0**

Balance (Pat. No. 292820) with 8½ in. (21.5 cm.) gun-metal beam to carry 200 grammes and sensitive to 2 milligrammes, agate knife edges and bearings, centre knife relieved when not in action ; the balance is provided with a 5 decigramme rider (placed on a rod, fitted above the divided beam in such a manner that it cannot readily be removed therefrom), in order to eliminate the use of all fractional weights. The beam is divided into 50 parts, from "0" on the left to "10" on the right ; the main divisions being numbered and sub-divided into 5 parts.

This balance is an ideal instrument for use in Science Laboratories in Schools, and in Industrial Laboratories for the purpose of weighing to the third decimal place.

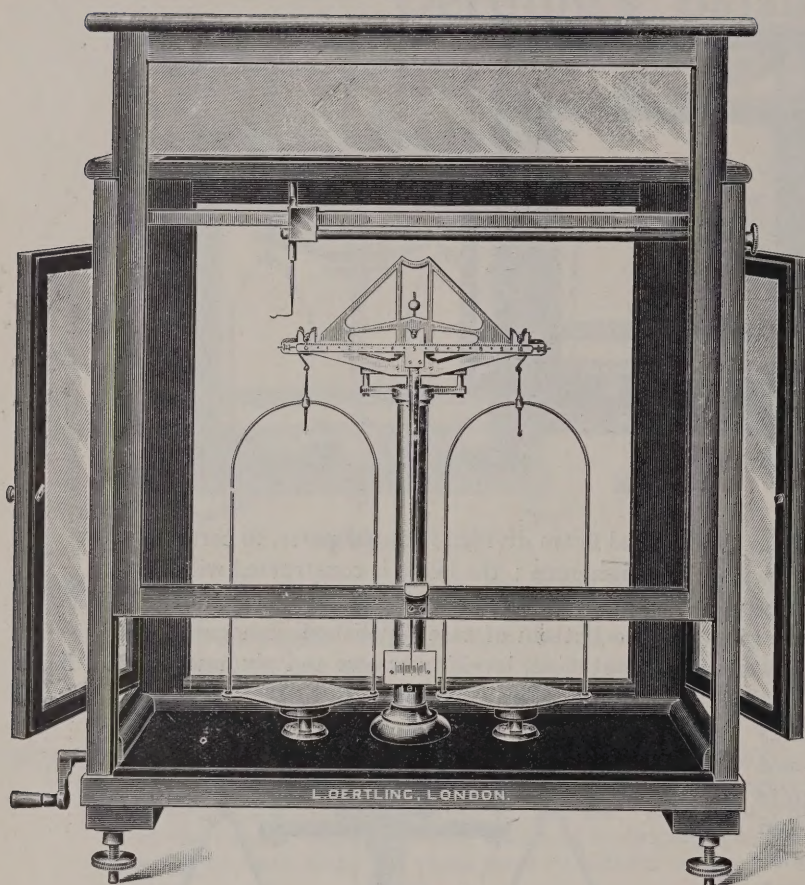
A set of weights from 200 to 1 gramme is provided with the balance, being let into the polished mahogany base (though not shown in the illustration).



SC266-SC269

SC266	Balance in gun-metal and brass ....	....	....	....	....	....	£6 15 0
SC267	Same balance in aluminium ....	....	....	....	....	....	£5 5 0
SC268	Aluminium balance in polished oak case ....	....	....	....	....	....	£7 5 0
SC269	Gun-metal and brass balance in polished oak case ....	....	....	....	....	....	£8 15 0

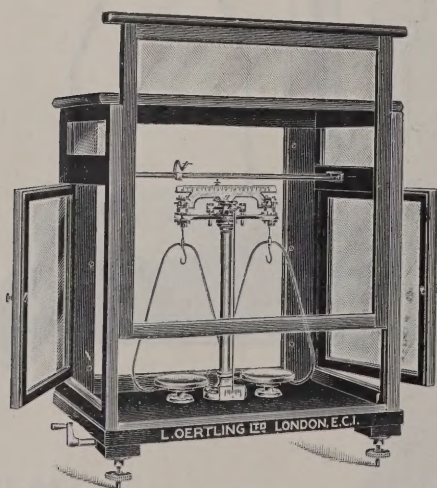
These balances can be supplied **without** the set of weights, if desired, at a reduction of 15/- per instrument.



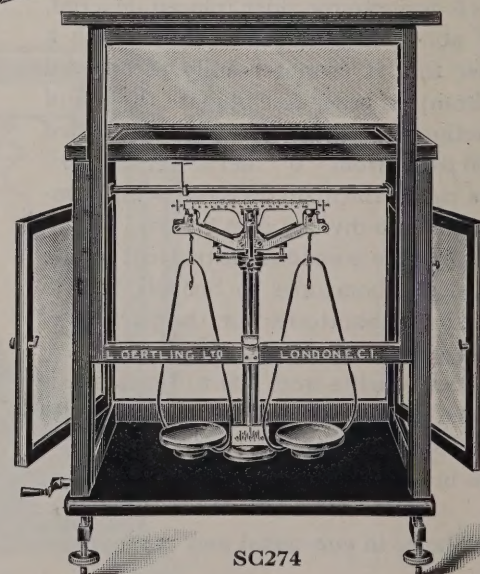
SC271

SC271 Balance, No. 7 SBT, with 6 in. (15.2 cm.), triangular gun-metal beam, with agate knife edges working on agate planes; capacity 200 grammes; sensitivity 0.1 milligramme; pan supports; vertical rider slide which traverses the entire length of the beam; rider bar on same plane as the knife edges; plummet; polished mahogany glass case, with counterpoise weights to front slide; black plate-glass base; levelling screws e £28 10 0

SC272 Balance, No. 31 A, with 13 cm. gun-metal beam to carry 200 grammes in each pan, and turn with 0.1 milligramme; agate knife edges working on agate planes; pan supports; rider slide which traverses the entire length of the beam; plate glass to bottom of case; polished mahogany glass case with counterpoise weights to front slide, and with levelling screws and plummet; this balance is fitted with side action e £27 10 0



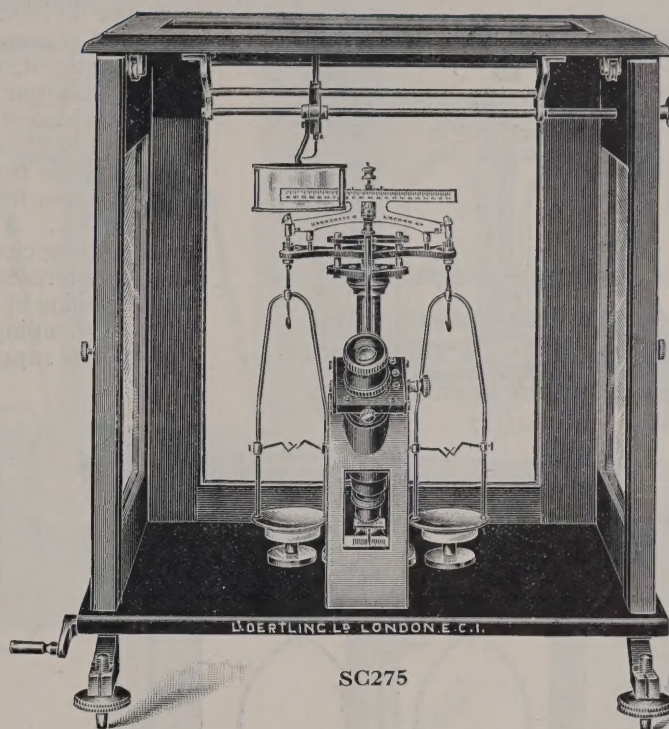
SC272



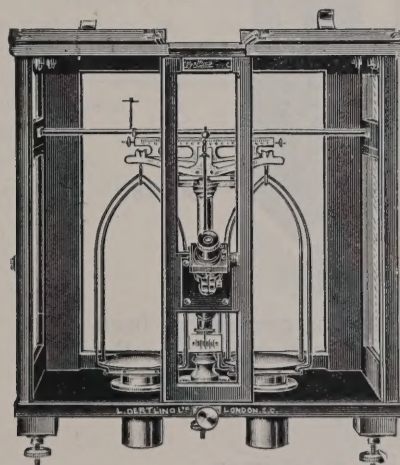
SC274

SC274 Balance of Precision, with 5 in. gun-metal beam, to carry 100 grammes in each pan, and sensitive to 0.1 milligramme. Agate knife edges on agate planes. The beam supports descend, and all knife edges are relieved when not in action. Adjustable pan supports. Beam divided along entire length from 0 to 100, and adjusted with a 5 milligramme rider at zero. Levelling plummet. Side action movement. Black plate-glass base. Polished mahogany glass case with side doors and counterpoise weights on front slide. Levelling screws e £18 10 0

SC275 Balance, with 4 in. (10 cm.) horizontal beam of hard rolled brass (gilt) to carry 10 grammes in each pan, and to turn with .01 milligramme on the ordinary index: agate knife edges working on agate planes; vertical rider slide. The beam is divided into 100 parts and is adjusted with a milligramme rider at zero on the left. The balance is provided with a powerful microscope and a micro scale is attached to the pointer having 100 divisions on either side of a central zero. The divisions on the micro scale are in the ratio of 10 to 1 on the ordinary index, so that a distinct reading to the 0.01 part of a milligramme is obtained. A vertical rider slide (to which an achromatic lens is fitted for the purpose of magnifying the serrations on the beam) is provided, and the balance is mounted in a polished mahogany case with side doors, plate glass base, counterpoised front slide and levelling screws. Price **£62 10 0**

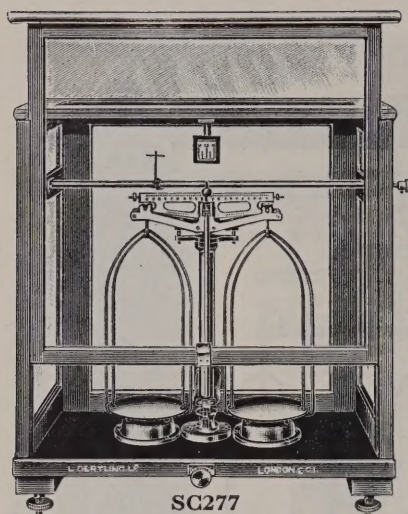


SC275



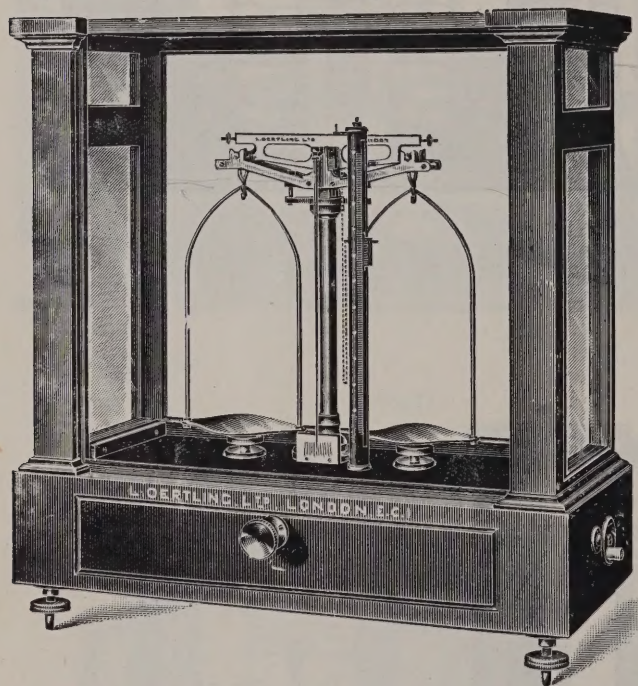
SC276

SC276 Aperiodic Balance, No. 52, with 7 in. gun-metal beam to carry 100 grammes in each pan, and sensitive to 1 division per milligramme (readings to 0.1 milligramme by estimation). The balance is provided with an air-damping device for agate knife edges working on agate; polished mahogany and glass case with fixed centre panel, in which a powerful microscope is fitted, and two counterpoised front slides; side doors to case and levelling screws. The levelling of the balance is obtained by "centering" the air-damping cylinders. **£25 0 0**



SC277

SC277 Aperiodic Prismatic Reflecting Balance, No. 53, with 6 in. gun-metal beam divided into 100 parts to carry 100 grammes in each pan, and sensitive to 0.1 milligramme per division on the illuminated scale; agate knife edges and planes; single rider slide which traverses the entire length of the beam; circular concave pan plates of aluminium ($3\frac{1}{4}$ in. between pan wires). The balance is provided with air-damping device for rapid weighings, and is fitted with a 12 volt electric projector lamp and variable resistance; the resistance being marked off in voltages from 100 to 250, and is suitable for either A.C. or D.C. A screw plug is supplied for tapping in off the lighting circuit. Polished mahogany and glass case with counterpoised front slide and levelling screws. The levelling of the balance is obtained by "centering" the air-damping cylinders. A nine-foot length of insulated flex is supplied e £40 0 0



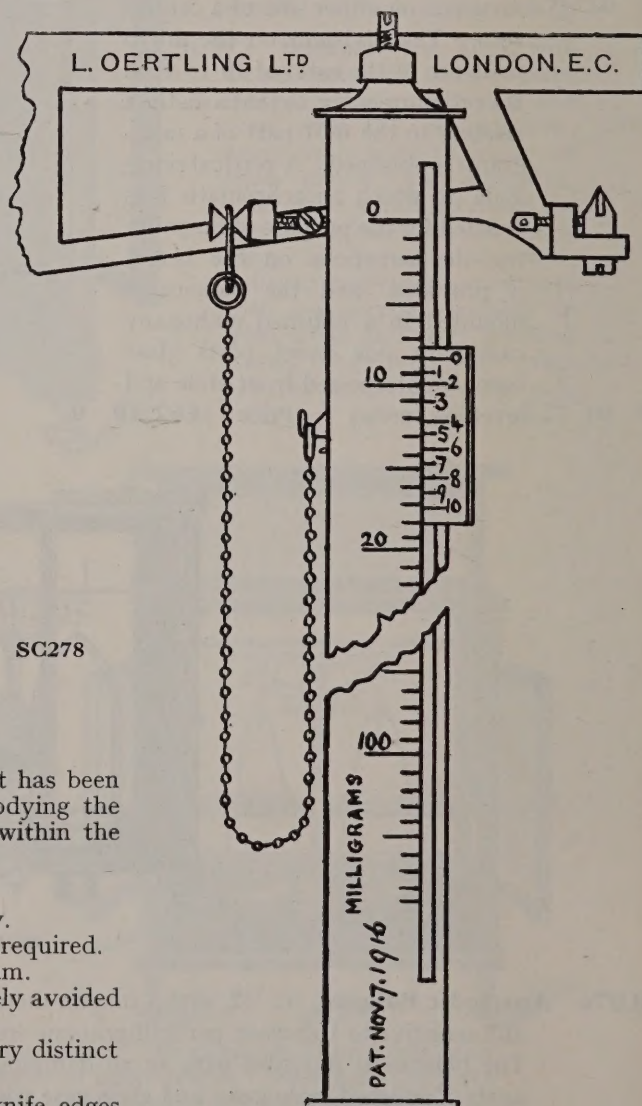
SC278

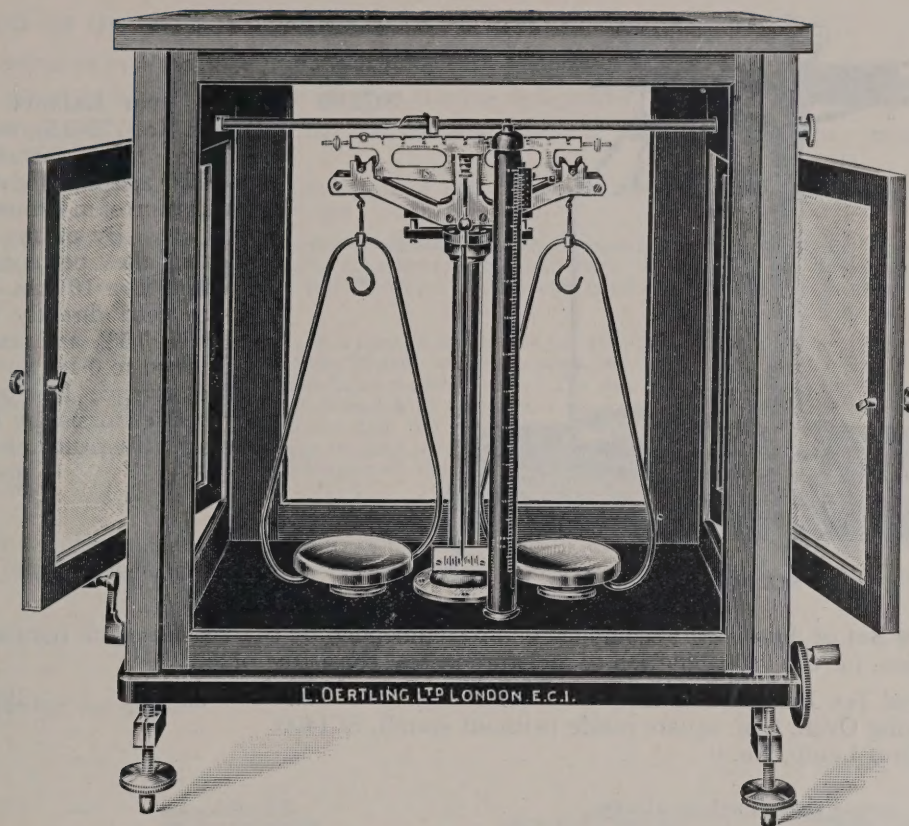
SC278 "Chainomatic" Balance. This instrument has been designed in order to produce a balance embodying the chainomatic system of weighing at a price within the range of all users of first-class balances.

The chief advantages are:

- Great saving of time—without loss of accuracy.
- Riders and weights below 0.1 gramme are not required.
- The possibility of error is reduced to a minimum.
- Continual opening and shutting of case is entirely avoided during the final weighings.
- The graduations, being white on black, are very distinct and can be read with ease.

The balance has a 6 in. gun-metal beam, agate knife edges working on agate planes; capacity 200 grammes; sensitivity 0.1 milligramme; pan supports; black plate-glass base; polished mahogany case with counterpoise weights to front slide and plummet e £35 0 0

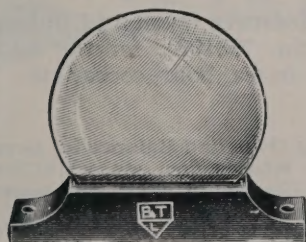




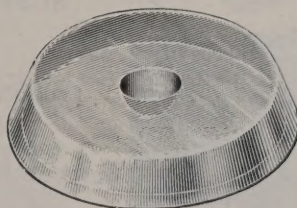
SC279

SC279 Gramme Chainomatic Balance, No. 48GC, with 5 in. beam of gun-metal to carry 100 grammes in each pan, and sensitive to 0.1 milligramme; agate knife edges working on agate planes; adjustable pan supports; the beam is serrated into 10 divisions from "0" on the left to "10" on the right and has a 5 decigramme rider at zero; each serration has the equivalent value of 1 decigramme, giving a total displacement of 1 grammes when the rider is placed on division "10"; the chainomatic column takes care of all weighings from 1 decigramme to 1 milligramme and readings to 0.1 milligramme are obtained by means of the vernier. Polished mahogany and glass case with black plate-glass base and side doors. The balance is fitted with side action; levelling screws and plummet

£36 0 0



SC282



SC284



SC285-SC286

SC282 Lens for Reading Balance Indices. The lens is mounted on a brass base which is provided with screw holes, and can be instantly removed if desired

£0 3 6

SC284 Glass Rests, with depression in centre, to take the stud and levelling screws of balances.

Per set of 3 £0 1 3

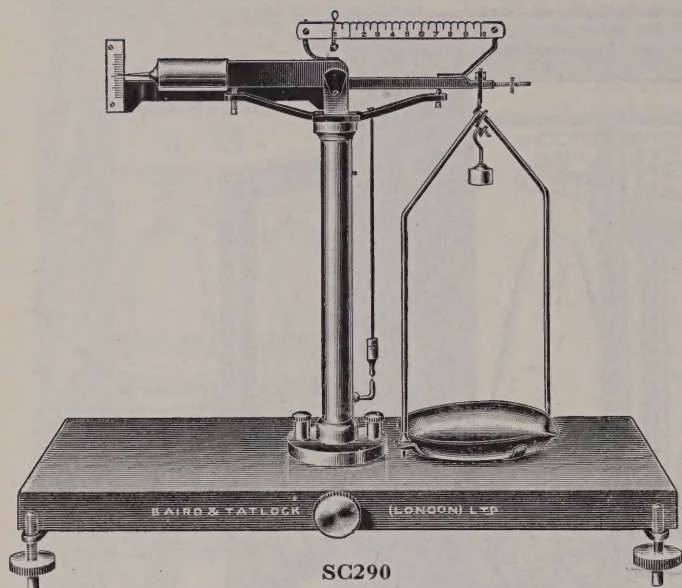
***SC285 Triangular Glass Desiccators,** suitable for placing inside balance cases, $3\frac{1}{8}$ by $2\frac{1}{4}$ in. high

£0 1 6

***SC286** " " " " " " 2 by $1\frac{1}{2}$ in. high

£0 1 3

For Silica Gel Air Dryers see Section III.



SC290 B.T.L. Lever Balance (Regd. Design No. 772615), with permanent rider attachment, specially adapted for the determination of moisture in tea, flour, etc. By means of this balance the percentage of moisture in a 10 grm. sample can be read directly on the beam to 0.5% and easily by estimation to 0.1%.

The balance has been recommended for use by The Tea Research Institute of Ceylon

Price *b* £3 10 0

SC291 Standard Set of Apparatus, compiled and recommended by the Tea Research Institute of Ceylon, for the determination of moisture in tea, consisting of:

A. Lever Tea Balance as SC290	....	....	....	....	Price	<i>b</i> £3 10 0
B. Drying Oven, 6 in. square inside (without stand), SC1400	....	....	....	....		<i>b</i> £2 5 0
*C. Primus Lamp, No. 0	....	....	....	....		<i>d</i> £0 13 9
Price of set as above	....	....	....	....		<i>b</i> £6 8 9

N.B.—The operation of the balance is similar to that in Apparatus No. SC294, but it is only provided with one graduated scale and rider.

Full instructions for use are sent with both the standard set of apparatus and the balance alone if ordered separately.

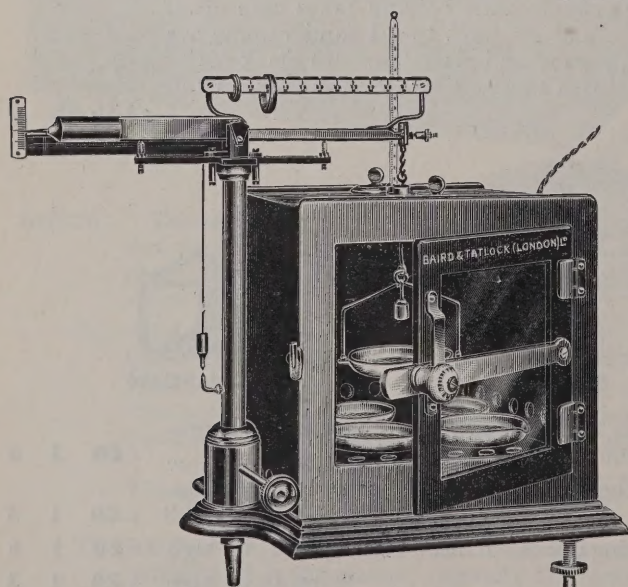
The following additional accessories can also be supplied if required:

SC292 D. 6 Tins for drying samples	....	....	<i>b</i> £0 9 0
E. 2 Silica Gel Air Dryers	....	....	<i>d</i> £0 3 0
F. 1 Glass Case to take Balance made of teak well waxed	....	....	<i>e</i> £1 10 0
G. 1 Quadripod for Oven	....	....	<i>b</i> £0 5 0

SC294 Electric Moisture Oven and Balance (Regd. Design No. 773193), for the estimation of moisture in tea, flour, cocoa, etc.

DESCRIPTION.

Combined Drying Oven and Balance for ascertaining the moisture content of tea, tobacco, flour, etc., whilst the material is actually being dried. The oven is electrically heated and is of copper. The size of the chamber is 6" × 6" × 6"; it is suitably ventilated and is fitted with a glass door. It is controlled by a bimetallic regulator to give a temperature of 212° F. Oven and balance are mounted on a common base fitted with levelling screws; the pan is suspended inside the oven. The balance weighs to 20 grms. and the beam is fitted with a double scale graduated 0–50% and 0–5%—the graduations indicating percentages of moisture, using a 20 grm. sample. Two riders are fitted, the larger weighing 10 grms., indicating percentages from 0 to 50 in steps of 5%, and the smaller weighing 1 grm., indicating percentages from 0–5 directly on the beam in steps of 1% and by estimation to 1/10%. A 20 grm. removable weight is suspended above the pan and an adjusting screw is fitted to the end of the beam.



SC294

METHOD OF OPERATION.

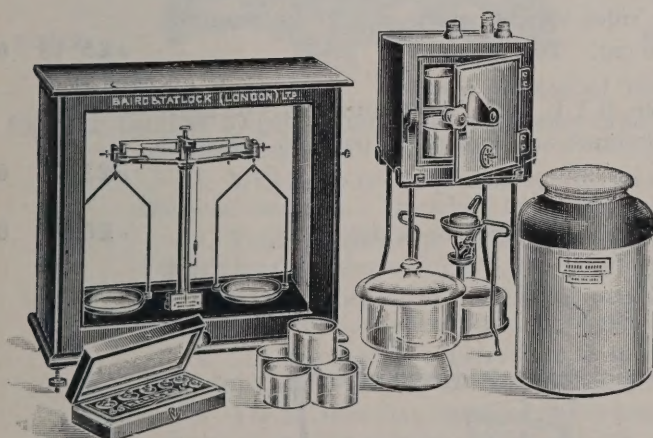
1. Switch on oven and set control as directed in the working instructions.
2. Adjust levelling screws so that plummet is in line with pointer.
3. With both rider weights at zero and 20 gm. weight in place above tared pan, adjust balance to indicate zero.
4. When oven has reached a temperature of 212° F. remove 20 gm. weight and add tea to tared pan until pointer again indicates zero.
5. When the drying process is complete as indicated by the maximum deviation being shown on the scale, adjust both sliding weights till pointer returns to zero. The sum of the percentages indicated by the two sliding weights will then give the percentage of the moisture in the original sample of tea.

The balance is supplied with five tared pans to enable five samples to be dried together; it is set to zero with one of the tared pans and the 20 gm. weight in position. The weight is then removed, and tea is added to the pan until the balance registers zero. The pan is then placed on the bottom of the oven. The same procedure is followed with three more pans and the last one is left on the balance. The oven door is then closed and the oven heated until the maximum deviation is shown on the scale, when a percentage reading is taken as indicated above, and, it being assumed that the tea in the four pans on the bottom of the oven is also dried, those pans are weighed and readings taken similarly.

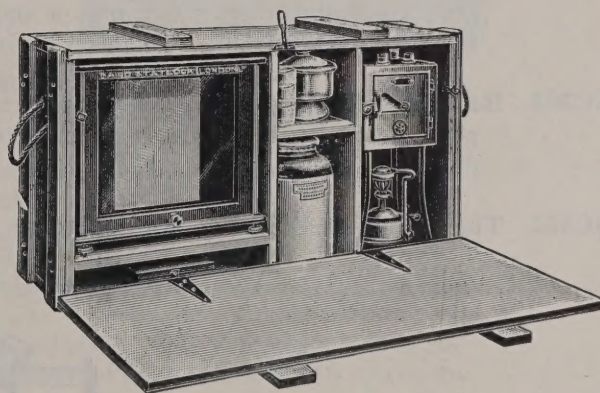
Price.—In stained deal box with 3-ply back and sliding 3-ply front fitted with blocks on side to provide stowage for beam. Consumption in watts, 300 Each £14 10 0

Please state voltage when ordering.

SC295 Spare Heater for above d £0 17 0



SC298

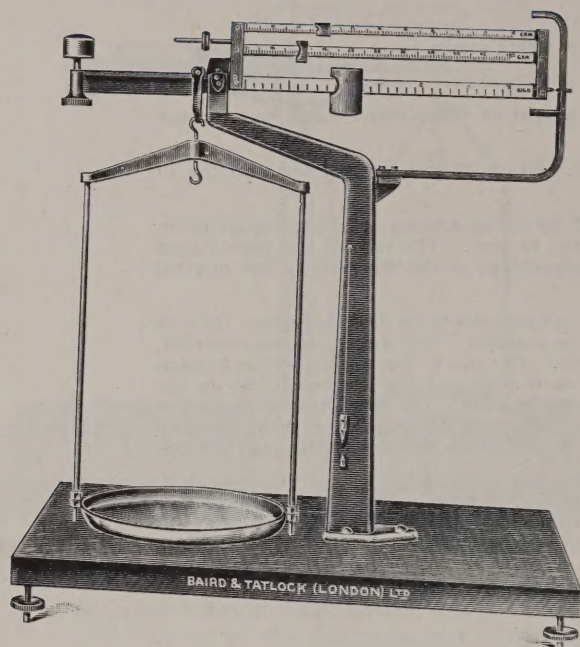


Set in case ready for storage or packing for transport. The hinged lid drops down, as shown, and can, if required, be used as a working bench.

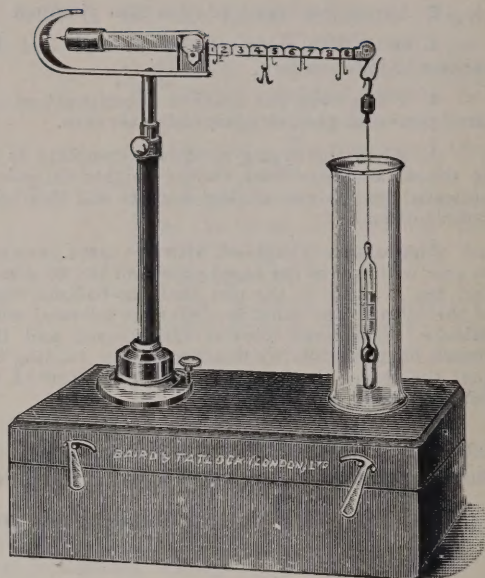
SC298 Standard Set of Apparatus, compiled and recommended by the Indian Tea Association, for the determination of moisture in tea.

- 1 Hot Water Oven 6 × 6 × 6 in. on stand 12 in. high.
- 1 Primus Stove for ditto.
- 1 B.B. Balance in case with sliding door, to carry 250 gm., and sensitive to 2 mg.
- 1 set Weights 100 gm.
- 1 Desiccator 6 in. diam. with zinc disc.
- 1 doz. Glass Dishes 3 in. diam.
- 1 × 10 lb. bottle Calcium Chloride, coml. granular.
- 1 Case, well made, to take above items, fitted with hinges, hasp and padlock.

Set as above, with instructions for use d £11 5 0



SC300

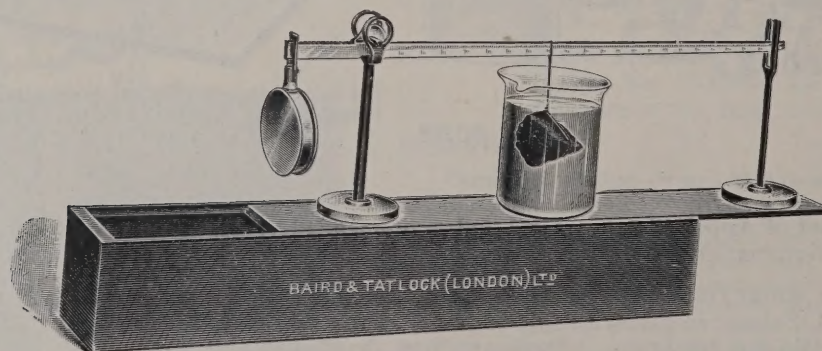


SC303



SC304

- SC300 **B.T.L. Decimal Balance** for direct reading without the use of weights, with three graduated arms each fitted with a sliding rider weight which cannot be removed. Sensitive to $\frac{1}{10}$ gramme. Diameter of pan 19 cm. To carry 3 kilos £5 13 6
- SC303 **Balance, Specific Gravity**, Westphals principle, B.T.L. make, agate knife edges on agate planes, complete with riders, thermometer plummet and forceps, in polished box, with directions £3 7 6
- SC304 **Thermometer Plummet**, with platinum wire and suspension hook, for above £0 14 0



SC306

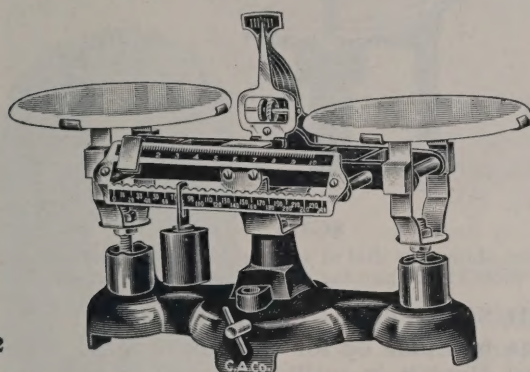
- SC306 **Balance, Walker's Specific Gravity**, for mineralogical purposes, especially constructed for taking the specific gravity of samples of ore, etc. The balance is easily portable and is supplied complete in case as figured, with instructions for use £5 10 0



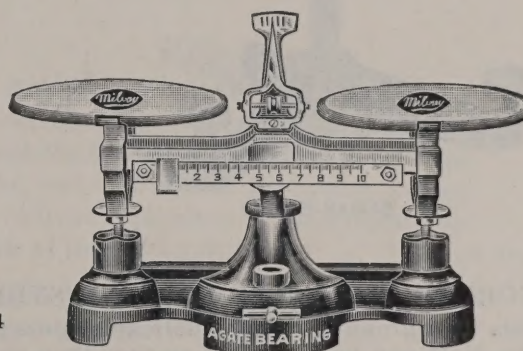
SC310

SC310 Balance, Beranger's principle, new design, in all-metal box with top plate of laminated Bakelite and two round brass movable pans. Very durable and serviceable; especially recommended for tropical climates. B.T.L. own make.

Diameter of pans	....	6	7	8 in.
To weigh	....	1	2	5 kilos.
Price	....	g £2 10 0	g £3 0 0	g £4 0 0



SC312



SC314

New Series of Weightless Balances.

***SC312 Double-beam Balance, 5,000 gramme capacity.** This instrument possesses the following advantages:

1. Weighs up to 250 grammes, with an accuracy of 0.1 gramme, by manipulation of the beam-weights. The whole range of small loose weights is thus rendered superfluous.
2. Total capacity of balance is 5,000 grammes, by using larger loose weights. Sensitivity 0.1 gramme up to 2,000 grammes; above that load slightly less.
3. A short period of oscillation, and the absence of small loose weights, render weighings both more speedy and more accurate.
4. The mechanical construction is accurate and rigid. The bearings are of agate, the beams are clearly graduated, and the finish is proof against fumes and corrosion.
5. The balance may be raised above bench-level by clamping to a 13 mm. rod. This permits of specific gravity determinations.

Price c £4 4 0

Ex Works Price for Export only, U.S.A. \$12

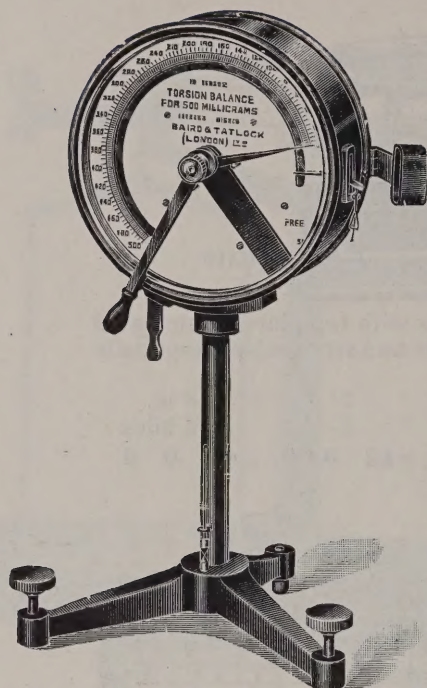
SC313 Weights, polished brass, for double-beam balances. The set contains one 100, two 200, one 500 gramme weights, of suitable accuracy, and extends the weighing range of these balances 1,000 grammes beyond their total beam capacity. In teak box Per set c £0 12 6

***SC314 Single-beam Balance, 5,000 gramme capacity.** This balance is a simplified type, having only one beam. It weighs up to 10 grammes, with an accuracy of 0.1 gramme, by manipulation of the beam-weight. Weighings up to 5,000 grammes are effected by the use of larger loose weights. The accuracy of construction and adjustment, and the general excellence of finish, correspond exactly with those of model SC312 Price c £3 12 0

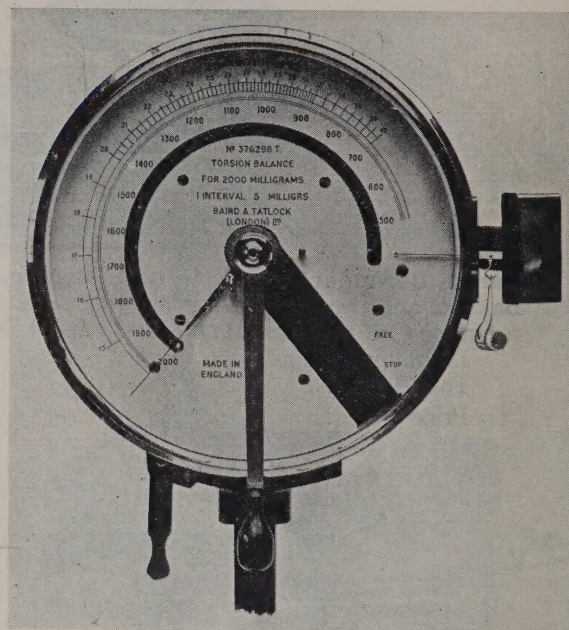
Ex Works Price for Export only, U.S.A. \$10

***SC315 Double-beam Balance, 5,000 gramme capacity.** This balance differs from model SC312 only in the graduations of the two beams. In this balance, the combined capacity of the two beams is 110 grammes. Above this load loose weights are employed. Price c £4 4 0

Ex Works Price for Export only, U.S.A. \$12



SC318-SC324



SC325

Illustration shows the dial of a torsion balance with special scale showing the number of cigarettes to the ounce.

TORSION BALANCES FOR INDUSTRIAL AND SCIENTIFIC PURPOSES.

This instrument is a very delicate balance, and can be made up for various ranges.

The dials can be arranged so that they can be read directly in milligrammes, or in number of articles to the ounce. It is extremely useful where large quantities of very small articles are weighed, such as wire filaments in the electric glow lamp industry, cigarettes in the tobacco industry, small quantities of chemicals in the chemical industry, and in the medical profession it is used for weighing blood samples.

It is dead beat in its action and therefore no time is lost due to oscillation of the pointer.

DIRECTIONS FOR USE.

The balance is first levelled by means of the plumb-bob and levelling screws. The small cover over the hook is swung-back and the object to be weighed is placed on the hook. The moving arm is released by means of the lever at the bottom of the case. The small pointer at the right of the centre of the case will then sink below the zero point, which is in the centre of its short scale. The hand-operated pointer is then turned to the left, using the large adjustable handle, until the small pointer reads "zero." The large pointer then indicates the weight of the object in milligrammes on the scale.

		Ref. No.	Range in Milligrammes.	No. of Divisions.	Value of each Division.	Price.
SC318	Torsion Balance	5	0-5	100	0.05 Mg.	£12 12 0
SC319	Torsion Balance	10	0-10	100	0.1 "	£10 10 0
SC320	Torsion Balance	50	0-50	100	0.5 "	£10 10 0
SC321	Torsion Balance	100	0-100	200	0.5 "	£10 10 0
SC322	Torsion Balance	200	0-200	200	1.0 "	£10 10 0
SC323	Torsion Balance	*500	0-500	500	1.0 "	£10 10 0
SC324	Torsion Balance	1000	0-1000	500	2.0 "	£10 10 0
SC325	Torsion Balance with milligramme scale as above and having in addition a special scale on which may be read the number of cigarettes to the ounce, when one of the cigarettes is placed on the balance.					

The balance is fitted with a pan to take the cigarette and a weight is provided for checking the accuracy of the graduated scale Price £12 12 0

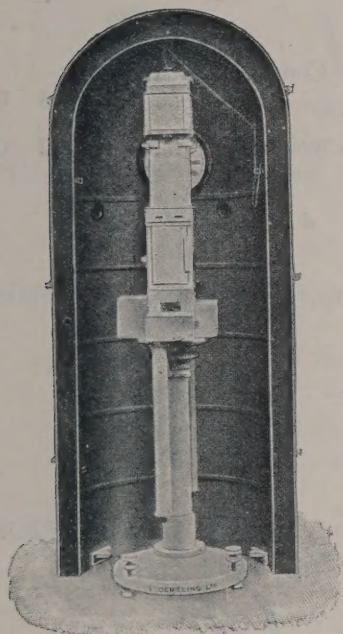
NOTE—Special scales as above for any other article, such as silk, cotton, yarn, etc., can be supplied.

* 500 milligramme size stocked.

Sets of Check Weights for Torsion Balances.

			For use with Torsion Balances, reading to	Value of each weight in Milligrammes.		Price.
SC326	Weights for above	....	0-5 Mg.	1, 2, 2, 5	....	f£0 5 0
SC327	Weights for above	....	0-10 „	1, 2, 2, 5	....	f£0 5 0
SC328	Weights for above	....	0-50 „	5, 10, 20, 30	....	f£0 5 0
SC329	Weights for above	....	0-100 „	10, 20, 40, 60	....	f£0 5 0
SC330	Weights for above	....	0-200 „	20, 40, 80, 100	....	f£0 5 0
SC331	Weights for above	....	0-500 „	100, 200, 400, 500	....	f£0 5 0
SC332	Weights for above	....	0-1000 „	100, 200, 400, 500	....	f£0 5 0

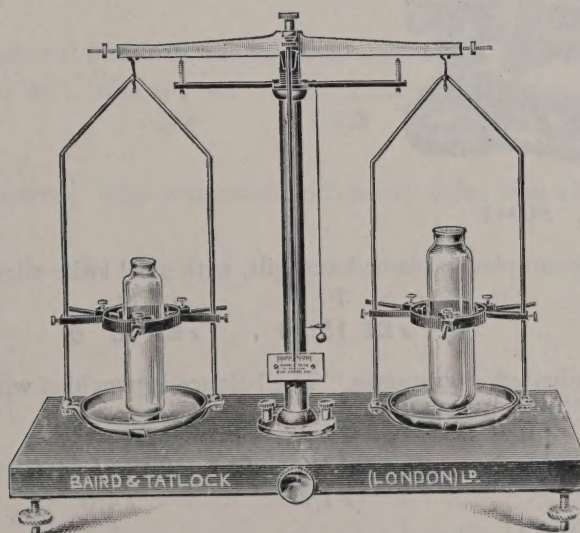
These weights are made in aluminium. Up to 10 mg. they are in the form of riders ; above this weight they are in the form of a triangle with hole and the value is marked on face.



SC334

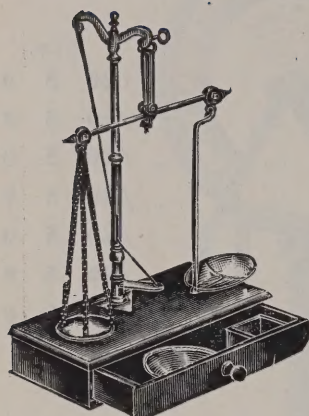
SC334 Eötvös Torsion Balance (patented). For the location of subterranean deposits of minerals and oil. New type (Automatic) combining photographic and visual readings with special metal tent. A special descriptive booklet will be sent on written application to all seriously interested in the use of this instrument Prices on application.

Manual of instruction for use of Geologists, Mining Engineers, etc., giving Theoretical and Practical information on this science £1 1 0

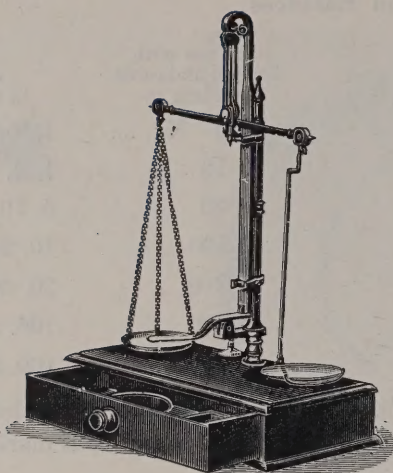


SC336

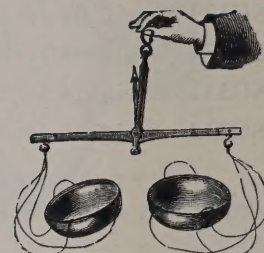
SC336 Balance, Counterpoising, with adjustable holders, enabling centrifuge tubes of any size up to 100 ml. capacity to be securely held in position £3 18 6



SC338



SC339

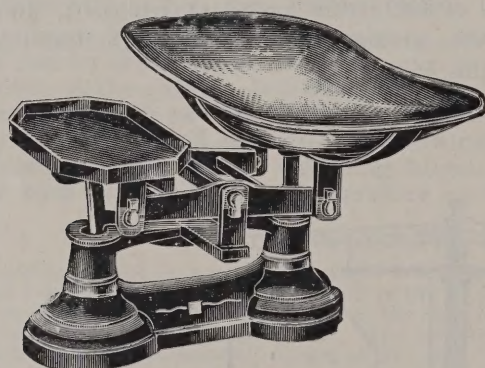


SC340

SC338 Balance, on polished mahogany box with drawer, and two glass pans. Complete with weights, 1 set $\frac{1}{2}$ to 6 grains and 1 set from $\frac{1}{2}$ scruple to 2 drachms e £3 3 0

SC339 Balance, on polished stand with drawer, and glass pans. Complete with weights e £3 12 0

***SC340** Hand Scales, with horn pans 6" 8" beam.
..... d 9/- d 12/- each.



SC342



SC343

SC342 Balance, for weighing samples, janned and gilt, with steel knife edges and bearings.

To weigh	....	7	14	28 lb.
Price	....	e £1 15 0	e £2 0 0	e £3 0 0

SC343 Spring Balances, graduated in grammes. The balance is provided with a hook and ring for suspension. With flat brass scale.

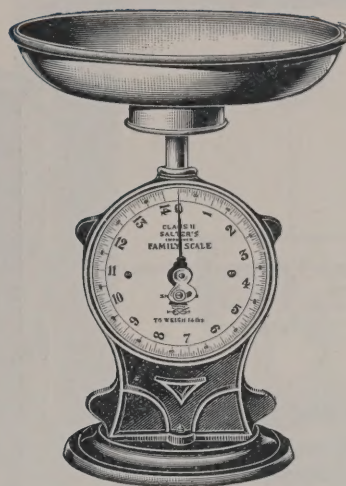
$5 \times \frac{1}{10}$	$10 \times \frac{1}{10}$	$12 \times \frac{1}{4}$ kilos.
e 13/6	e 47/-	e 13/6 dozen.
e 1/3	e 4/6	e 1/3 each.

SC344 Spring Balances, similar to above.

Capacity	....	50	100	100	250	500	1,000 grms.
Reading to	....	$2\frac{1}{2}$	5	1	5	10	10 "
		e 14/-	e 19/-	e 51/-	e 60/-	e 80/-	e 98/- per doz.
		e 1/3	e 1/9	e 4/6	e 5/6	e 7/3	e 9/- each.



SC346



SC352

SC346 Spring Balances, with tubular brass case

$\frac{1}{10}$ kilo up to	....	....	....	....	3	5 kilos.
					e 3/9	e 4/6 each.

SC348 Spring Balances, graduated in pounds and divisions of a pound, with brass dial and hook as No. SC343.

2 lb. $\times \frac{1}{4}$ oz.	4 lb. $\times \frac{1}{2}$ oz.	6 lb. $\times 1$ oz.	8 lb. $\times 1$ oz.	10 lb. $\times 1$ oz.	12 lb. $\times 1$ oz.
e 8/6	e 8/6	e 8/-	e 8/6	e 9/6	e 14/- each.
8 lb. $\times 2$ oz.	10 lb. $\times 2$ oz.	14 lb. $\times 2$ oz.	20 lb. $\times 2$ oz.	24 lb. $\times 2$ oz.	50 lb. $\times \frac{1}{4}$ lb.
e 8/-	e 8/-	e 8/6	e 9/6	e 14/-	e 18/- each.

SC350 Spring Balances, as above, but with tubular brass case as No. SC346.

2 lb. $\times 1$ oz.	4 lb. $\times 1$ oz.	6 lb. $\times 4$ oz.	8 lb. $\times 2$ oz.	10 lb. $\times 4$ oz.	20 lb. $\times 4$ oz.
e 3/9	e 5/-	e 3/2	e 5/3	e 3/9	e 7/- each.

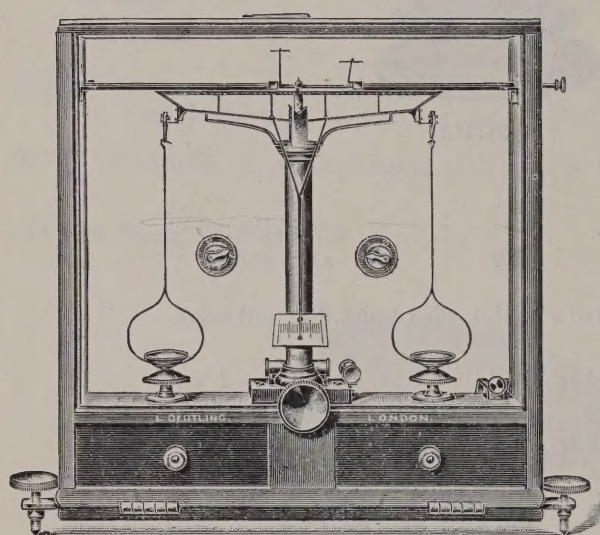
SC352 Pedestal Spring Balances. Cast-iron stand with heavy brass base and enamelled dial round scale.

(a) 7 lbs. to $\frac{1}{2}$ oz. 5 in. dial	....	....	....	....	each	e £0 10 6
(b) 14 " 1 " 5 " "	....	....	....	....	"	e £0 11 0
(c) 25 " 1 " $7\frac{3}{4}$ " "	....	....	....	....	"	e £0 12 6
(d) 28 " 2 " $6\frac{1}{2}$ " "	....	....	....	....	"	e £1 4 6
(e) 50 " 2 " $7\frac{3}{4}$ " "	....	....	....	....	"	e £1 5 6

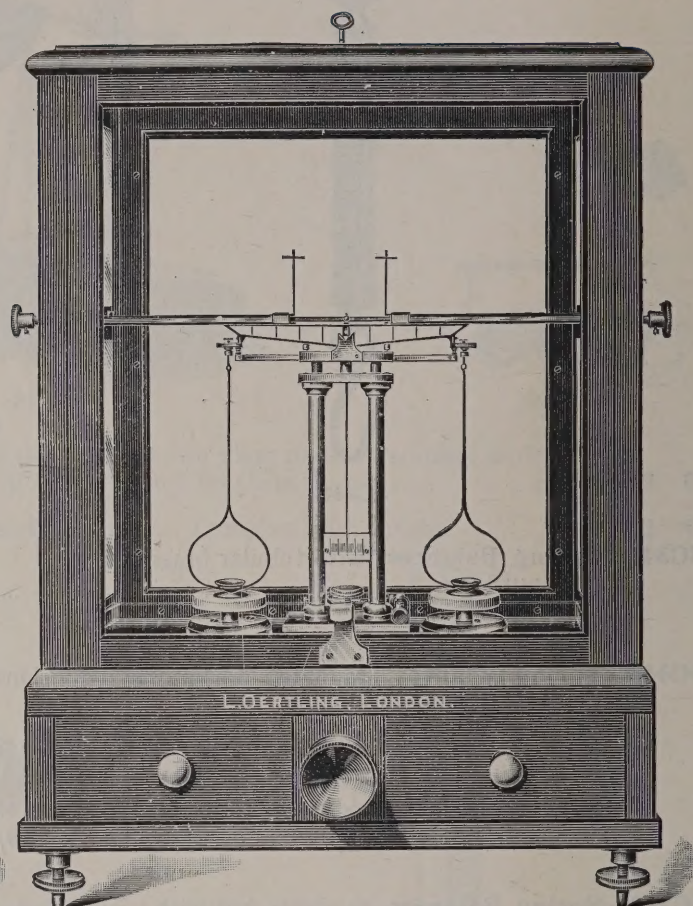
SC354 Pedestal Spring Balances. With graduations on circular dial as SC352.

(a) 5 kilo to 20 gr. 5 in. dial	....	....	....	....	each	e £0 10 6
(b) 10 " 50 " " "	....	....	....	....	"	e £0 11 0
(c) 15 " 50 " " "	....	....	....	....	"	e £1 4 0
(d) 20 " 50 " " "	....	....	....	....	"	e £0 12 6
(e) 25 " 100 " " "	....	....	....	....	"	e £1 5 6

Assay Balances.



SC360



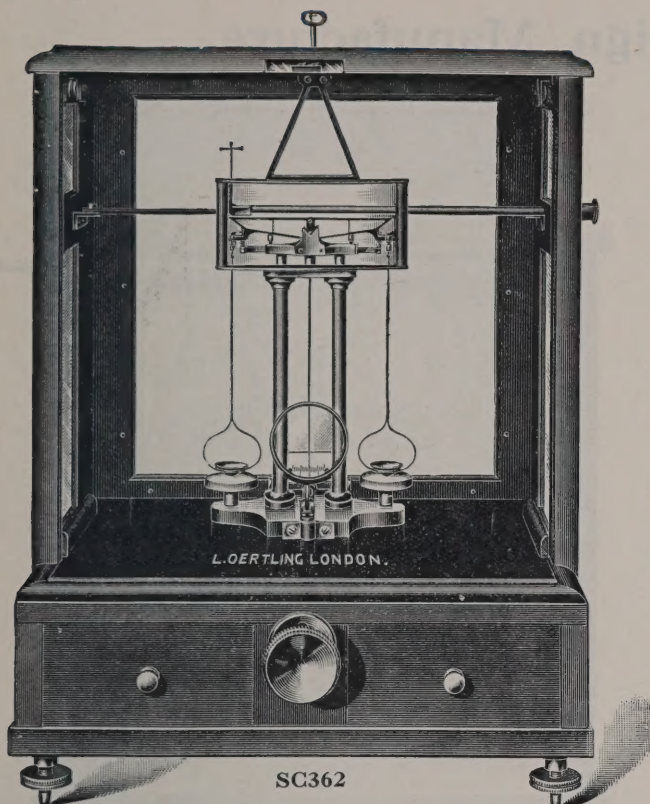
SC361

SC360 Portable Assay Balance, No. 17, with 5 in. horizontal beam (12·7 cm.) to carry 2 grammes in each pan, and turn with 0·05 milligramme. The beam is constructed with agate knife edges working on agate and is divided into 100 parts; double rider slide, levels, and levelling screws; outside dimensions of case, 8 in. square by 2 in. deep e £20 0 0

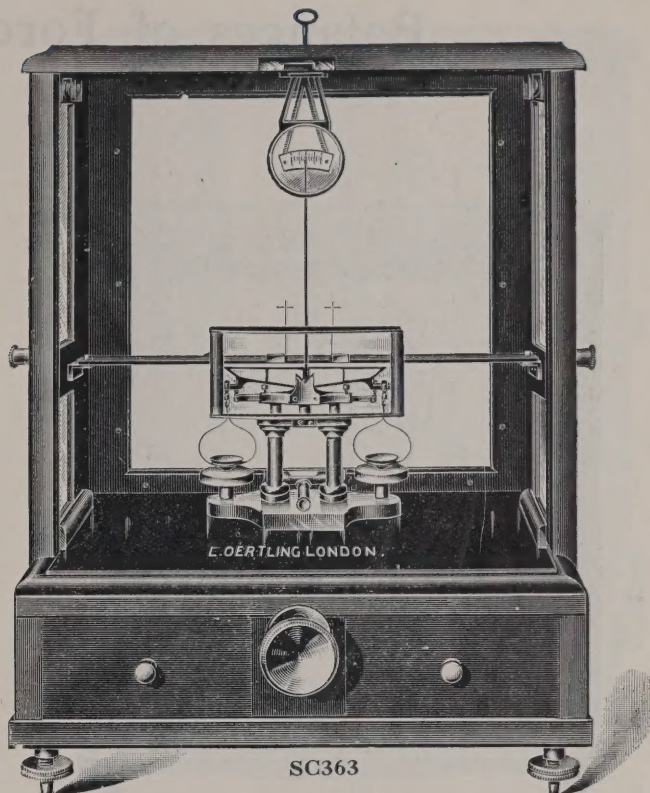
SC360a Balance, as above, in leather case e £23 0 0

SC361 Assay Balance, No. 12 S.B.A. (as used by the Royal Mint, Royal Arsenal, Assay Offices and Principal Gold Mining Cos.), with 6 in. horizontal beam (15·2 cm.) to carry 2 grammes in each pan and turn with 0·01 milligramme. The beam is constructed with agate knife edges working on agate planes (which are all relieved when not in use) and divided into 100 parts. Double rider slide, plate glass to bottom of case; polished mahogany glass case with counterpoise weights fitted to front slide.... e £50 0 0

Other patterns of Assay Balances quoted on request.



SC362



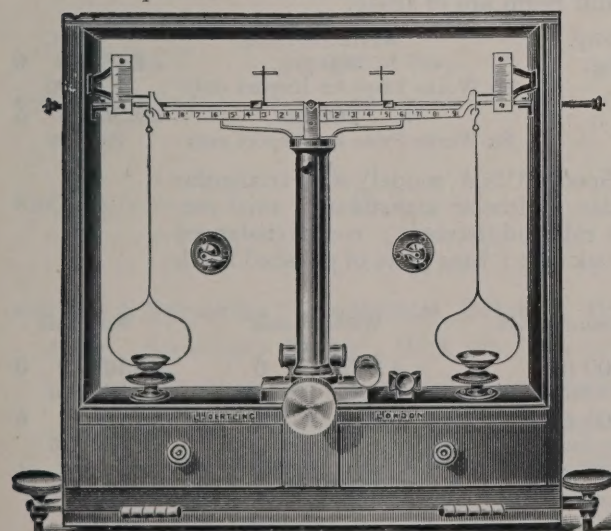
SC363

SC362 Balance, Oertling's Assay, No. 12B (new pattern), with 4-in. (10-centimetre) beam, divided into 100 parts. The beam is constructed with agate knife edges working on agate planes, and the end knife edges are relieved when not in action. Sensitivity 0.005 milligramme. The pointer makes one complete oscillation in 10 seconds, and with 0.1 milligramme on beam shows 10 divisions on scale. Lenses for beam and index. Capacity 1 gramme in each pan. Single rider apparatus. Full sub-base plate-glass covering entire bottom of case, including table-part. Polished mahogany glass case with counterpoise weights fitted to front slide

£65 0 0

SC363 Balance, Oertling's Assay, No. 11C (new pattern). Capacity 1 gramme, sensitivity 0.005 milligramme, with 4-in. (10-centimetre) beam, inverted type; divided into 100 parts; 50 divisions each side. The beam is constructed with agate knife edges working on agate planes, and all knife edges are relieved when not in action. The pointer makes one complete oscillation in 10 seconds, and with 0.1 milligramme shows 10 divisions on scale. Lenses for beam and index. Double rider apparatus. Two levels fitted to base. Full sub-base plate-glass covering entire bottom of case, including table-part. Polished mahogany glass case with counterpoise weights fitted to front slide, and with adjusting screws

£65 0 0



SC364

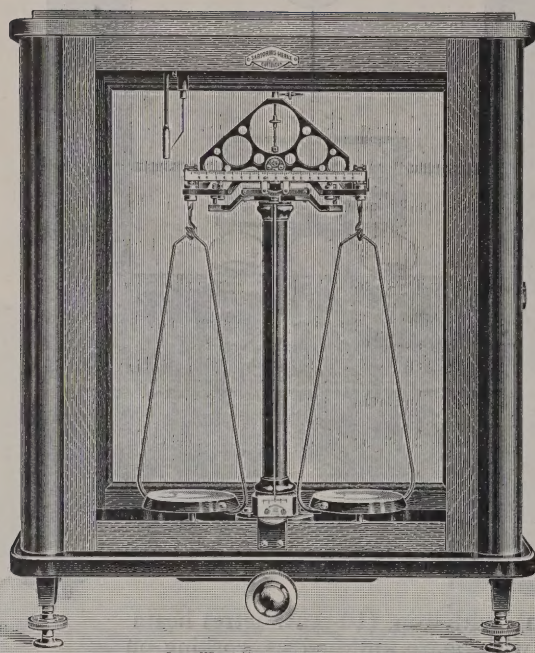
SC364 Balance, Oertling's Portable Assay, No. 16, to carry 2 grammes in each pan, and turn with 0.1 milligramme; fitted with double rider slide, levels, and three levelling screws, steel knife edges on agate planes; outside dimensions of case, 8 in. square by 2 in. deep

£15 15 0

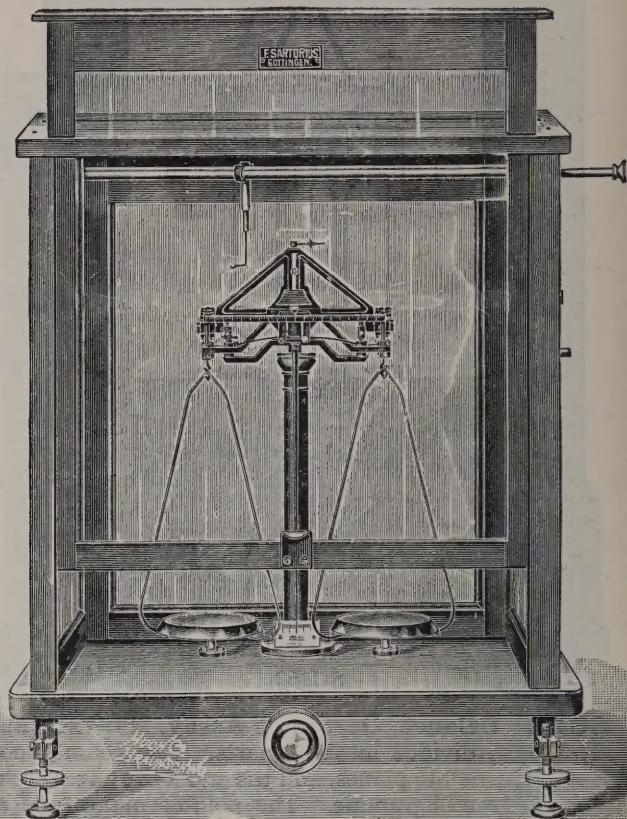
SC365 If with agate knife edges extra £1 10 0

SC366 Leather Case, with shoulder strap, to carry above balance extra £3 10 0

Balances of Foreign Manufacture.



SC370-SC371



SC372-SC374

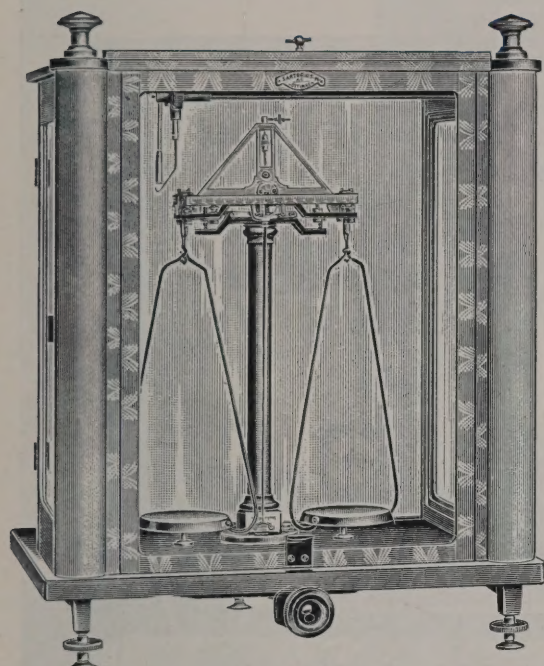
“Sartorius” Short Beam Analytical Balance, No. 4, with triangular, gold-plated phosphor bronze or aluminium beam; rider arm in front of the beam and precision rider adjustment. Mahogany case with counterbalanced sliding front; the counterbalancing weights run in highly polished brass tubes. Polished black glass base plate; circular arrestment; axial correction and compensation suspensions; agate knife edges and planes. All points of contact of the arrestment and beam are of agate.

	Length of Beam.	Sensitivity.	Maximum Load.	Price.
*SC370	18 cm.	0.1 mg.	500 gm.	d £45 10 0
			Ex Works Price for Export only	RM 500
*SC371	14 „	0.1 „	200 gm.	d £36 7 6
			Ex Works Price for Export only	RM 400

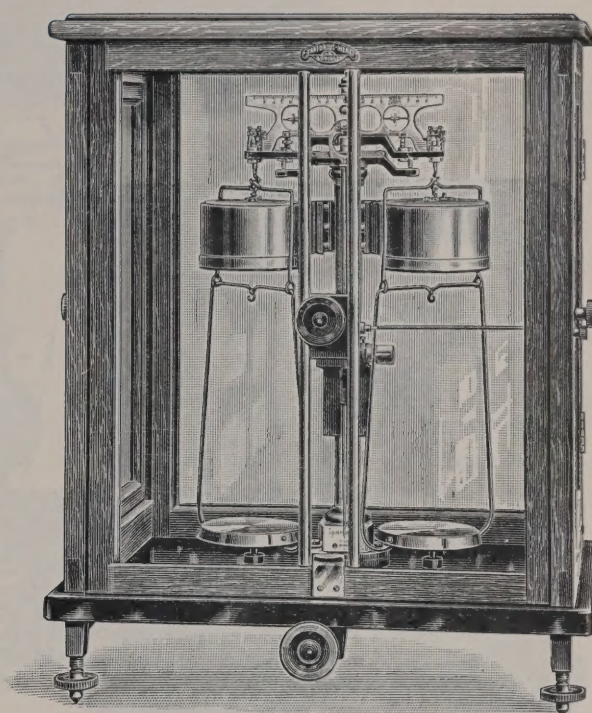
“Sartorius” Short Beam Analytical Balance, No. 8b, (Special U.S.A. model), with triangular aluminium beam; knife edges and planes of agate. Circular arrestment; axial correction and compensation suspensions; precision rider adjustment; counterbalanced sliding front, counterbalancing weights enclosed; oak case; base plate of polished black glass. An excellent model for laboratories.

	Length of Beam.	Sensitivity.	Maximum Load.	Without side doors.	With side doors.
*SC372	18 cm.	0.5 mg.	500 mg.	d £27 5 0	d £30 10 0
			Ex Works Price for Export only	RM 300	RM 335
*SC373	14 „	0.1 „	200 mg.	d £18 17 6	d £19 17 6
			Ex Works Price for Export only	RM 205	RM 215
*SC374	12 „	0.1 „	100 mg.	d £18 17 6	d £19 17 6
			Ex Works Price for Export only	RM 205	RM 215

All points of contact of arrestment and beam can be supplied of agate at slight extra cost.



SC375-SC376



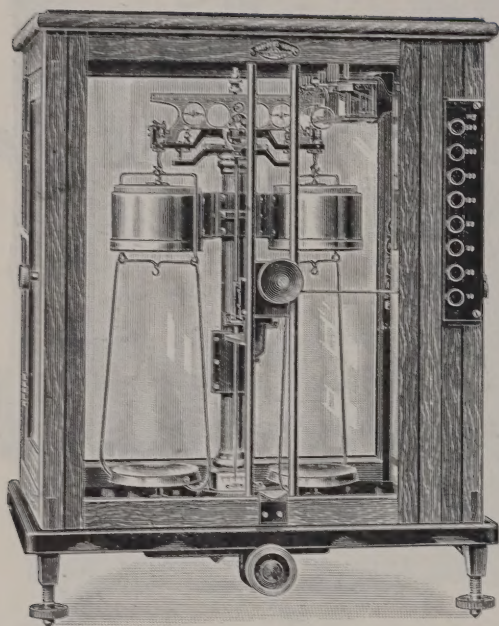
SC377

“Sartorius” Short Beam Analytical Balance, No. 2, with aluminium beam, circular arrestment, axial correction and compensation suspensions; knife edges and planes of agate. Balances for loads of 100 or 200 grammes are supplied in well finished aluminium cases and the larger models in attractive highly polished mahogany cases with counterbalanced sliding front and polished black glass plate. These balances are characterised by their extremely attractive design and high sensitivity and are unequalled for performance. All points of contact of the arrestment and beam are of agate.

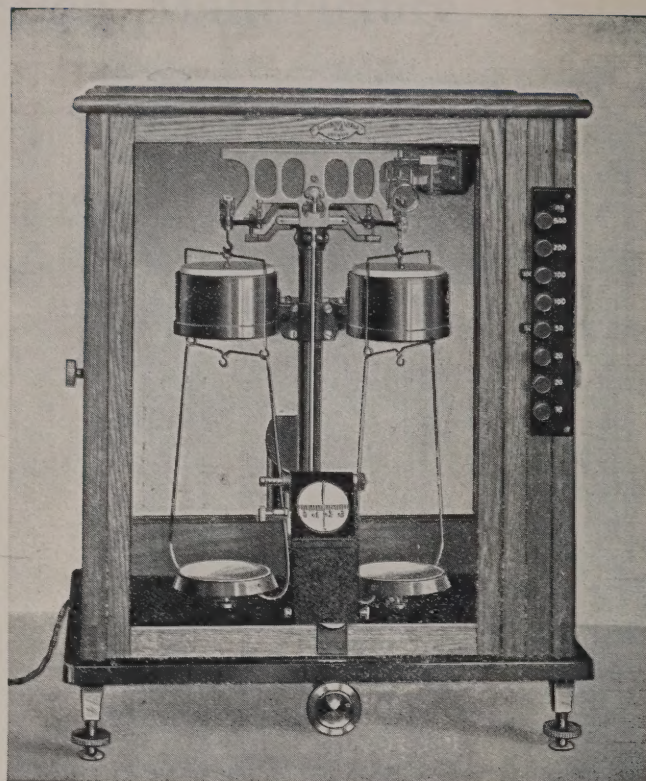
	Length of Beam.	Sensitivity.	Maximum Load.	Price.
*SC375	14 cm.	0.1 mg.	200 gm.	d £54 12 6
			Ex Works Price for Export only	RM 600
*SC376	12 „	0.05 „	100 gm.	d £54 0 0
			Ex Works Price for Export only	RM 590

*SC377 “Sartorius” Analytical Balance, D2, with damping device and optical reading. Sensitivity $\frac{1}{10}$ mg. With air damping arrangement, circular beam arrestment, axis correction, compensated hangers, knife edges and planes of agate. With telescopic reading to 100 mg. on an optical scale, one division on optical scale = 1 mg. $\frac{1}{10}$ mg. can be estimated by the interval between the divisions. No weights below 100 mg. required. Maximum load, 200 grms.

Price d £34 2
Ex Works Price for Export only RM 375



SC378



SC380

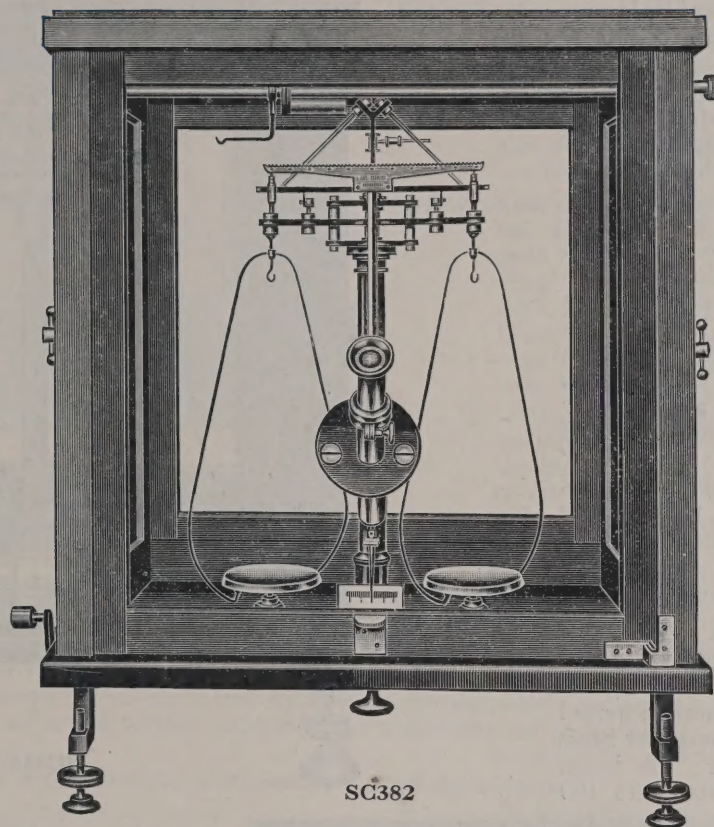
*SC378 "Sartorius" Analytical Balance, D3, with damping device and optical reading and arrangement for manipulating fraction weights from outside without opening the balance. Sensitivity $\frac{1}{10}$ mg. With air damping device, circular arrestment, axis correction, compensated hangers, knife edges and planes of agate. Telescopic reading to 10 mg. on an optical scale, one scale division = 0.2 mg., adjustable from without. Mechanical manipulation of the fractions from 10 to 500 mg. No weights below 1 g. required. Maximum load, 200 grms. Price d £43 5 0
Ex Works Price for Export only RM 475

"Sartorius" Damping Balances with projected milligramme scale. In this model, by means of a small electric lamp placed outside the balance case and a system of lenses and mirrors, an enlarged image of the scale is projected on to a ground glass disc and the image moves across the field as the pointer swings. A transformer or resistance enabling the lamp to be run direct from the mains is included with the balance.

*SC379 Balance, D2, as SC377, but with the above projection device in place of the optical reading arrangement d £39 12 6
Ex Works Price for Export only RM 435

*SC380 Balance, D3, with automatic rider system as SC378 and above projection device d £48 15 0
Ex Works Price for Export only RM 355

Please state voltage of mains and whether A.C. or D.C.



SC382

***SC382 Bunge Physical and Analytical Balance, No. 0, to carry up to 200 g.** Most highly recommended for very rapid determination of weights within $\frac{1}{100}$ of a mg. or utmost accuracy within $\frac{1}{100}$ mg., to be read off direct in full divisions of the scale.

About 40 mm. above the point of the index there is attached to the latter, at an angle of 45° , a white glass micrometer divided into 100 parts in a length of 10 mm. (figured at every whole mm.), which is observed through a simple reading microscope magnifying ten times and provided with "spider lines." The ordinary reading on the ivory scale is not interfered with, and in this way a technical balance combined with an analytical or physical balance of the most superior kind is provided, which will meet the most exacting requirements.

The centre of gravity of the beam is situated so low as to cause the index to indicate 1° on the ivory scale for every mg. By means of the microscope the oscillations of the index may be read off (while absolutely avoiding any parallax) from the glass scale. This scale is divided into tenths of a degree which correspond exactly to tenths of a mg. The duration of the oscillations of the balance are reduced (through the low situation of the centre of gravity) to such an extent as to make its ratio to that of any other similar balance of equal delicacy as $1 : \sqrt{7}$ —that is to say, 10 seconds for a load of 100 g. Correspondingly the accuracy is seven times greater, for varying loads.

If arranged for use as a physical balance the index will show 1° on the ivory scale for every $\frac{1}{100}$ of a mg., and in the microscope 1° for every $\frac{1}{100}$ part of a mg. Hence tenths of a mg. may be read off on the rider scale and hundredths of mg. through the microscope, direct, in whole divisions of the scale.

The beams are of hard-rolled German silver, plated with gold or platinum. All swinging parts are of finest German silver; the pivots and bearings as well as the contacts of the beam and of the pan suspensions and pans are of agate. The rider scale is divided by notches, accurately cut by machinery, so that any unintentional displacement of the rider is rendered impossible, and the pointer stamped out triangularly, so that vibration of the point is completely avoided. The balance is mounted on a black slab

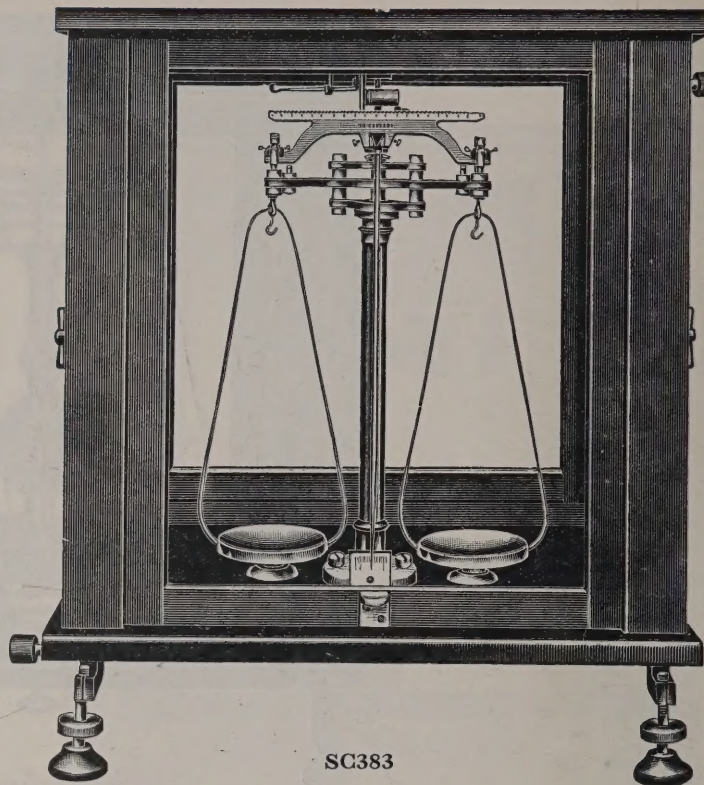
Price £40 0 0

Ex Works Price for Export only RM 445

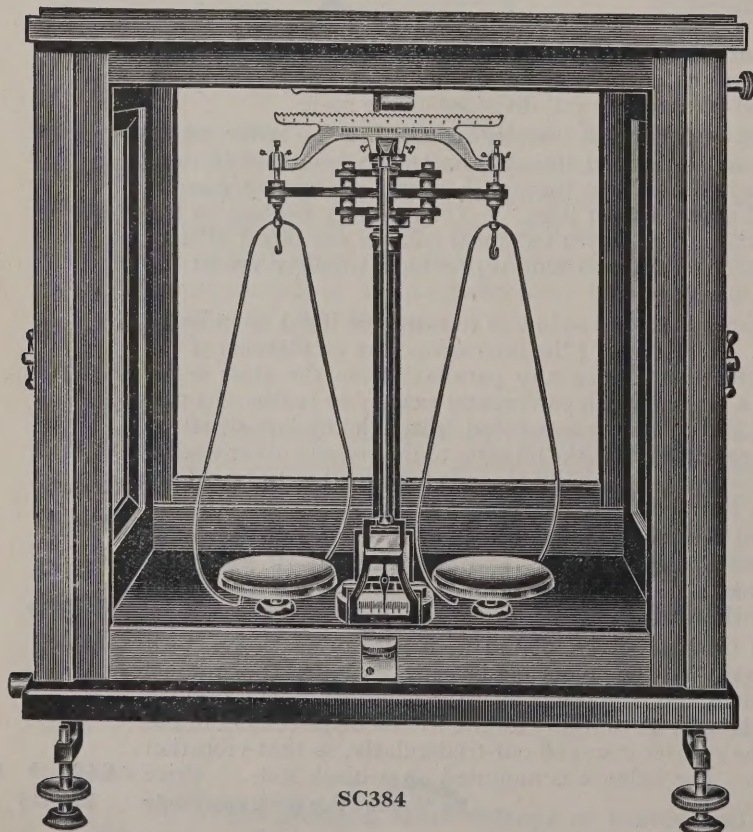
***SC383 Bunge Analytical Balance, No. 9A, to carry up to 200 g.** Beam of best red brass with round pointer. The beam itself is divided and graduated into 100 notches, so that any unintentional displacement of the rider is rendered impossible. The knife edges and planes of agate. With 4 points of support for the beam. Case with two side doors and one sliding front. The zero point is at the left hand or, if desired, in the middle. Length of the beam = 13 cm., scale room = 11 × 20 cm. All swinging parts are of finely polished German silver. Mounted on black glass slab. Showing 1° for 0.2 mg. or 0.1 mg., but unless especially ordered the balance will be supplied showing 1° for 0.2 mg. Price *d* £22 10 0

Ex Works Price for Export only RM 245

***SC384 Bunge Quick Precision Balance, No. 10, to carry up to 200 g.,** with mirror reading arrangement and two superimposed scales. Beam of best red brass with round pointer; the beam divided and graduated into 100



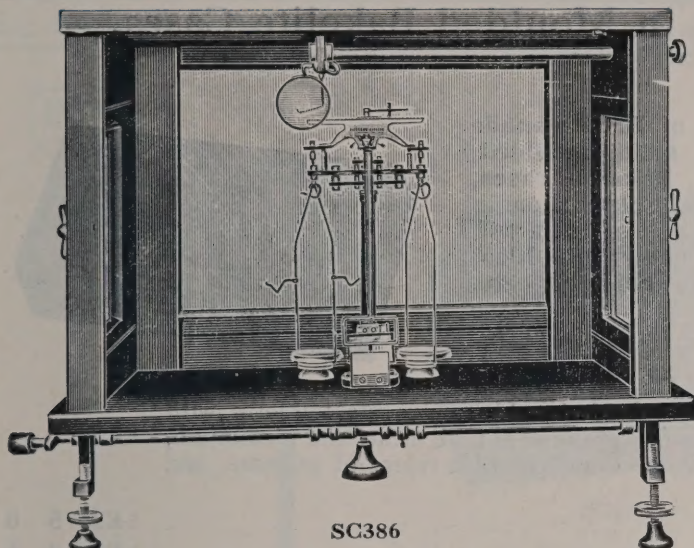
SC383



SC384

divisions. Owing to the low situation of the centre of gravity the sensitivity is the same for any load. The knife edges and planes as well as all contacts of the beam and pan suspensions are of agate; 4 points of support for the beam. In order to be able to read tenths of a mg. direct, without extending the time of oscillation, a mirror magnifying five times is arranged at the foot of the pillar so as to reflect, on a magnified scale, without any disturbing reflexes or distortions, an opal glass scale arranged about 20 mm. above the ivory scale, and divided into fifths of mm. The result in mg. is read off the ivory scale, and to determine tenths of a mg. it is only necessary to glance at the glass scale reflected in the mirror. Seeing that it is therefore only at the final reading that the mirror is made use of, and as both eyes are employed, the sight is not fatigued in any way and the two scales can be worked with the greatest satisfaction. Knife edges and planes as well as the contacts of the beam and pan suspensions of best agate. Showing 1° for 0.1 mg. in the concave mirror Price *d* £27 5 0

Ex Works Price for Export only RM 300



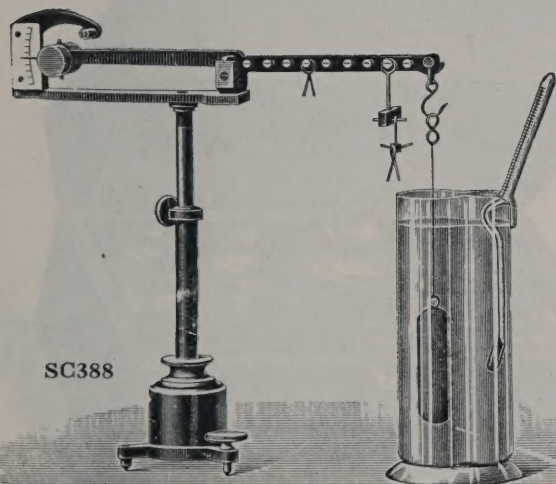
SC386

*SC385 Bunge Quick Precision Balance, No. 11, to carry up to 500 g., equipment as SC384, pans of German silver. Showing 1° for 0.1 mg. in the concave mirror Price d £34 5 0
Ex Works Price for Export only RM 380

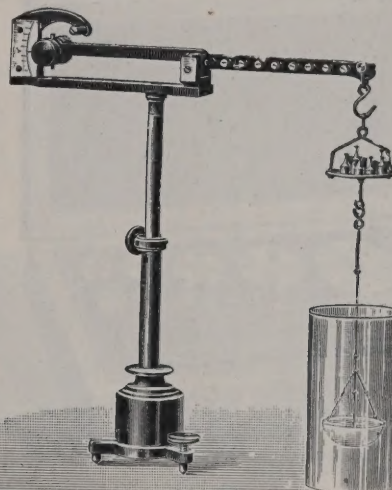
*SC386 Kuhlmann's Micro-Chemical Balance, No. 19a, as used by the late Prof. Fritz Pregl. Maximum load 20 grammes; beam of hard-rolled brass 7 cm. long with upper edge cut acutely and provided with machine-cut notches for the rider; all swinging parts heavily platinum plated and the knife edges and bearings of selected agate most carefully ground; front door well balanced in order to prevent disturbance due to shaking;

arrangement for adjusting the zero which does not affect the sensitivity; fitting to hold the absorption apparatus; movable lens for easy reading of the rider divisions. Six tared flasks numbered and provided with fine clean shot and two filling tubes are included. By means of a mirror reading arrangement the image of the pointer shows 10 divisions for every 0.1 milligramme; thus deviation by a single division = 0.01 milligramme, and by estimation this can be still further subdivided to read 0.001 milligramme d £34 10 0
Ex Works Price for Export only RM 383

*SC387 Set of Weights for above, heavily platinised and carefully adjusted d £4 7 6
Ex Works Price for Export only RM 45



SC388



SC389

*SC388 "Sartorius" Balance for taking Specific Gravities, on adjustable stand, with levelling screws, and Rumann's float, displacing 10 cubic centimetres of water, all fitted in case. The riders are arranged for four places of decimals, weighing 10, 1, 0.1, 0.01 grms. d £8 10 0
Ex Works Price for Export only RM 104

*SC389 "Sartorius" Specific Gravity Balance, with pan for weights, suitable for taking the specific gravity of solids and liquids d £11 0 0
Ex Works Price for Export only RM 128

*SC390 Spare Plummets, solid glass, displacing 10 grms. of distilled water, as used with "Sartorius" Specific Gravity Balances each d £0 13 0

For Balances for Weighing Animals see Section XXV.

A black leather box with a metal clasp and a label that reads "PAIRB & TATLOCK (LONDON) LTD". The box is shown from a three-quarter perspective, highlighting its rectangular shape and the texture of the leather. The metal clasp is located on the front edge. The label is centered on the top surface. The corners of the box are reinforced with metal plates, each featuring a small, illegible logo.

An open wooden box containing a set of 10 numbered wooden pegs (200, 100, 50, 20, 10, 5, 2, 1, 0.5, 0.2) and a small wooden tray with compartments for the pegs.

An open wooden box, likely a presentation case for medals or coins. The interior of the lid is inscribed with "BAIRD & TATLOCK (LONDON) LTD." in a serif font. The box is filled with various medals and coins. On the left side, there are two large, circular medals with intricate designs. To their right, there are several smaller medals and coins, some of which are arranged in a row at the bottom of the box. The box is made of dark wood and has a small metal latch on the front edge.



SC420-SC422

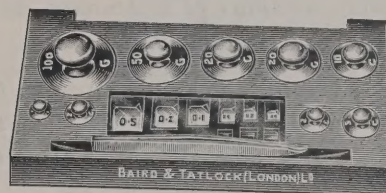
Weights, B.T.L. Chemical, for general students or works use, in polished mahogany boxes with hinged lid; forceps; fractions of a gramme in pure nickel and aluminium; each piece fitted separately, with glass plate over the fractions.

SC420	200 grammes to 0.001 gramme	....	b £1 7 6
SC421	500 " 0.001 "	....	b £2 2 6
SC422	1000 " 0.001 "	....	b £2 15 0

B.T.L. Students' Weights in Moulded Bakelite Cases.



SC433



SC439

Series G. Students' Chemical and Physical Weights, of polished brass, values engraved on knob, fractions of a gramme in nickel and aluminium. Complete in Bakelite case with hinged lid.

SC430	50 grammes to 0.001 gramme	....	....	....	....	per set	b £0 15 0
SC431	100 " 0.001 "	....	....	....	....	"	b £0 17 6

Series H. Physical Weights, as SC430, but second quality, with values stamped on weights.

SC432	50 grammes to 0.001 gramme	....	....	....	....	per set	b £0 8 6
SC433	100 " 0.001 "	....	....	....	....	"	b £0 10 0

Series K. Physical Weights, as SC432, but without fractions of a gramme.

SC434	50 grammes to 1 gramme	....	....	....	....	per set	b £0 7 0
SC435	100 " 1 "	....	....	....	....	"	b £0 8 6

B.T.L. Weights in Bakelite Blocks.

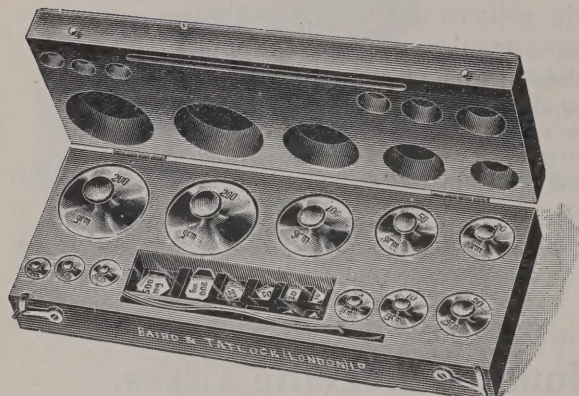
Series L. Physical Weights in blocks, with fractions of a gramme in nickel and aluminium.

SC438	50 grammes to 0.001 gramme	....	....	....	....	per set	b £0 7 3
SC439	100 " 0.001 "	....	....	....	....	"	b £0 8 3

Series M. Physical Weights, as above, but without fractions of a gramme.

SC440	50 grammes to 1 gramme	....	....	....	....	per set	b £0 5 9
SC441	100 " 1 "	....	....	....	....	"	b £0 7 3

B.T.L. Physical Weights in Wooden Cases.



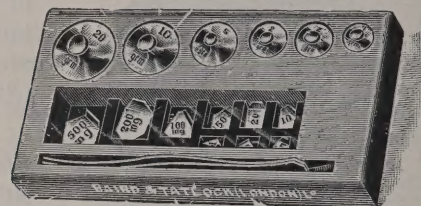
SC446-SC448

B.T.L. Physical Weights in polished wood box with hinged lid and glass plate to cover small weights, fractions of a gramme in nickel and aluminium.

SC446	200 grammes to 0.001 gramme	per set	b £0 13 6
SC447	500 " 0.001 " "		b £1 1 0
SC448	1000 " 0.001 " "		b £1 13 0

B.T.L. Physical Weights in polished wood box with cover.

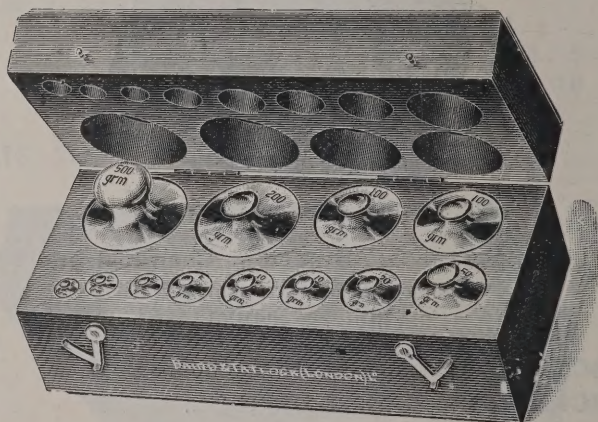
SC455	500 grammes to 1 gramme	per set	b £0 19 6
SC456	1000 " 1 " "		b £1 10 0
SC457	2000 " 1 " "		b £3 6 0



SC444

B.T.L. Physical Weights in wood block, with fractions of a gramme in aluminium.

SC444	100 grammes to 0.001 gramme	per set				b £0 8 6
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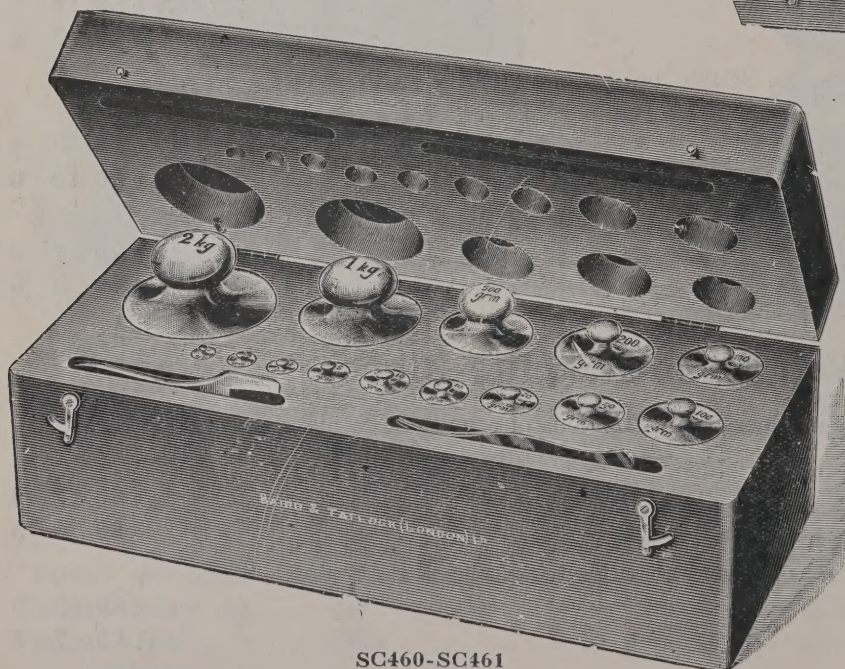


SC455-SC457

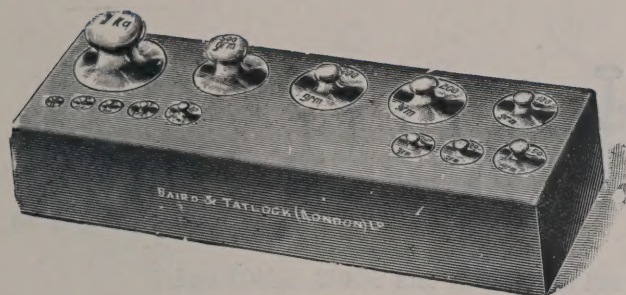
B.T.L. Physical Weights in polished wood case, with cover, lifter and forceps.

SC460	2000 grammes to 1 gramme	per set	b £3 15 0
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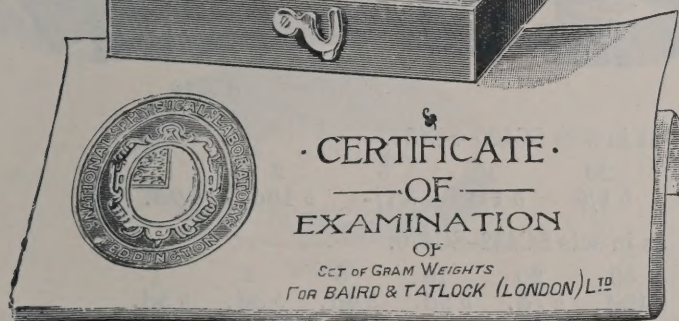
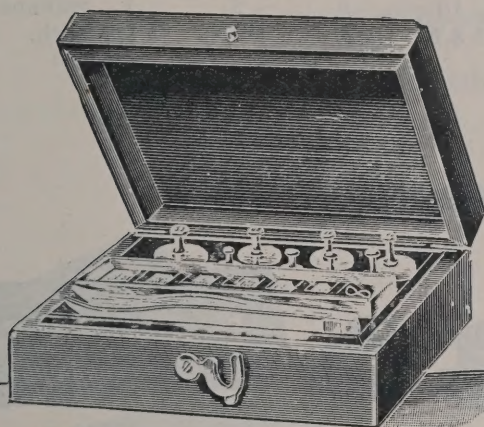
SC461	5000 grammes to 1 gramme	per set	b £5 0 0
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SC460-SC461



SC465-SC468

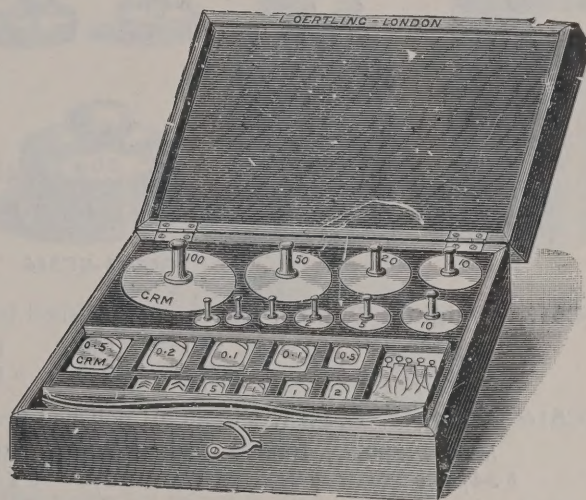


SC480-SC481

B.T.L. Physical Weights in wood block.

SC465	500 grammes to 1 gramme	per set	b £0 16 6
SC466	1000	" 1 "	" b £1 5 0
SC467	2000	" 1 "	" b £2 7 6
SC468	5000	" 1 "	" b £4 10 0

SC470 B.T.L. Physical Weights, 2 kilo to .001 gramme, polished brass, fractions in nickel and aluminium, suitable for Lecture Balances, SC239-SC242, and Decimal Balance, SC290, complete in teak box with hinged cover b £3 10 0



SC482-SC491

Weights (Oertling), Standard Analytical, in polished mahogany case, velvet lined. Fractions of a gramme in gold, weights of 1 gramme and upwards polished brass, with National Physical Laboratory Certificate.

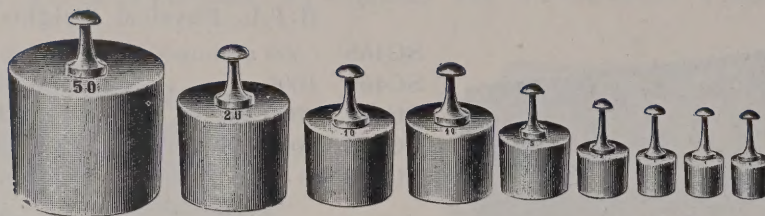
SC480	50 grammes to 0.001 gramme	....	....	....	....	....	....	....	£7 15 0
SC481	100	" 0.001	"	....	....	....	....	....	£8 15 0

Weights (Oertling), Analytical, as above, but without N.P.L. Certificate, fractions of a gramme in gold, 1 gramme and upwards in polished brass.

SC482	1000 grammes to 0.001 gramme	....	....	....	....	....	....	....	£8 15 0
SC483	500	" 0.001	"	....	....	....	....	....	£7 15 0
SC484	200	" 0.001	"	....	....	....	....	....	£4 15 0
SC485	100	" 0.001	"	....	....	....	....	....	£4 0 0
SC486	50	" 0.001	"	....	....	....	....	....	£3 5 0

Weights (Oertling), Analytical, as above, but without N.P.L. Certificate, fractions of a gramme in platinum, 1 gramme and upwards polished brass.

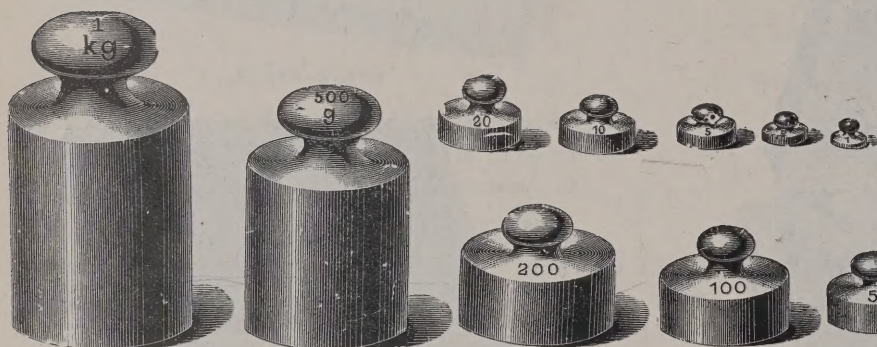
SC487	1000 grammes to 0.001 gramme	....	....	....	....	....	....	....	£9 15 0
SC488	500	" 0.001	"	....	....	....	....	....	£8 15 0
SC489	200	" 0.001	"	....	....	....	....	....	£5 15 0
SC490	100	" 0.001	"	....	....	....	....	....	£5 0 0
SC491	50	" 0.001	"	....	....	....	....	....	£4 5 0



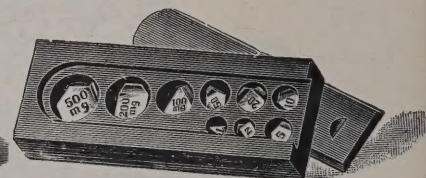
SC510

SC510 Weights, B.T.L., Analytical, gold-plated brass, tall form, as in sets SC402, SC403 and SC410.

	200	100	50	20	10	5	2	1	gramme.
Price	 b 10/-	b 5/6	b 4/-	b 3/9	b 3/6	b 2/-	b 2/-	b 1/9	each.



SC513-SC516



SC518

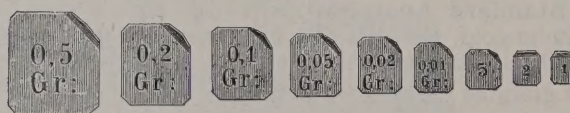
SC513 Weights, B.T.L., Chemical, polished brass as in sets SC420-SC431.

1000	500	200	100	50	20	10	5	2	1
b 8/-	b 6/6	b 4/-	b 2/9	b 1/8	b 1/6	b 1/2	b 1/-	b 10d.	b 9d.

SC516 Weights, B.T.L., Physical, polished brass, as in sets SC432-SC470.

5000	2000	1000	500	200	100	50	20	10	5	2	1
b 34/-	b 15/-	b 7/-	b 4/-	b 2/6	b 1/6	b 10d.	b 7d.	b 5d.	b 4d.	b 3d.	b 3d.

*SC518 Weights, 500 milligrammes to 1 milligramme, in wooden box with sliding lid per set d £0 4 3



SC520-SC528

SC520 Weights, Analytical, Platinum, as in sets SC487-SC491.

	0.5	0.2	0.1	0.05	0.02	0.01	gramme.
Price	 f 8/6	f 5/6	f 4/6	f 4/-	f 3/6	f 3/-	each.

Price of Platinum Weights varying according to fluctuation of Platinum.

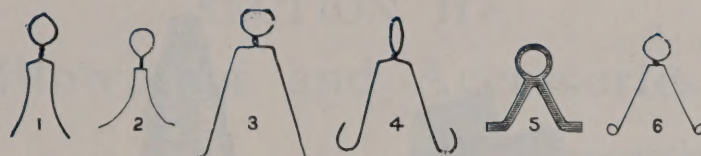
SC522 Weights, Analytical, Gold, as in sets SC482-SC486.

	0.5	0.2	0.1	0.05	0.02	0.01	gramme.
	d 3/-	d 2/6	d 2/6	d 2/6	d 1/9	d 1/9	each.

SC524 Weights, fractional, Analytical, as in sets SC402, SC403 and SC410, 0.5 to 0.01 in pure nickel, 0.005 to 0.001 in aluminium each b £0 0 9

SC526 Weights, fractional, Chemical, as in sets SC420-SC431, 0.5 to 0.01 in pure nickel, 0.005 to 0.001 in aluminium each b £0 0 6

SC528 Weights, fractional, Physical, as in sets SC432-SC448, 0.5 to 0.001 in pure nickel, 0.005 to 0.001 in aluminium each b £0 0 3



SC533

SC533 Riders for Analytical Balances.

No.	....	....	1	2	3	5	6
Weight	....	....	0.01	0.001	0.01	0.05	0.005 gramme.
Price	....	....	b 1/-	b 9d.	b 9d.	b 9d.	b 9d. each.

Grain Weights and Riders supplied to order.

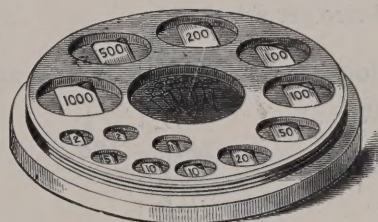
CONVERSION TABLE OF WEIGHTS.

Ounces (Avoirdupois).	Grammes.	Grains.
0.00229	0.0648	1
0.0352	1	15.43
1	28.35	437.5
16	453.6	7000

Assay Weights.



SC535



SC535

SC534 Assay Weights, 1 gramme and its subdivisions in 1000 parts, for assaying silver, weights of **platinum**, and **specially adjusted** for use with balances of a greater sensitivity than 0.02 milligramme d £5 5 0

SC535 Assay Weights, 1/2 gramme and its subdivisions in 1000 parts, for assaying gold, weights of **gold**, and specially adjusted for use with balances of a greater sensitivity than 0.02 milligramme d £4 4 0

SC536 Assay Weights, 1 gramme and its subdivisions in 1000 parts, weights of **gold** for assaying silver d £3 0 0

SC537 Assay Weights, 1/2 gramme and its subdivisions in 1000 parts, weights of **gold** for assaying gold d £3 0 0

SC538 Single Weights for above sets.

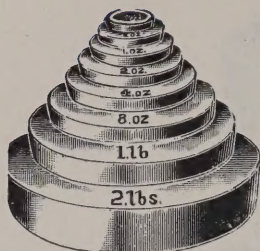
Milligrammes :	1000	500	200	100	50	20	10	5	2	1
	d 4/-	d 4/-	d 3/6	d 3/6	d 3/-	d 2/6	d 2/6	d 2/-	d 2/-	d 2/-

(Ordinary adjustment ; platinised for 1-grm. set ; gilt for 1/2-grm. set.)

SC539 Riders.

Milligrammes :	(10, 5, 2.5, 1, .5).
Specially adjusted	 d 1/6 each ; d 15/- per dozen.
Ordinary adjustment	 d 1/- „ d 10/- „

Price of Platinum Weights varying according to fluctuation of market.



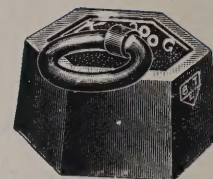
SC540



SC544



SC546



SC546

SC540 Weights, flat brass, in sets.

From	....	$\frac{1}{4}$ oz. to $\frac{1}{2}$ lb.	1	2	4 lbs.
Price per set		d 4/3	d 7/6	d 12/6	d 24/-

SC542 Weights, flat brass, single, as above.

	$\frac{1}{4}$	$\frac{1}{2}$	1	2	4	8 oz.	1	2	4	7 lbs.
Price	d 3d.	d 4d.	d 6d.	d 8d.	d 1/-	d 1/10	d 3/6	d 7/-	d 13/-	d 21/- each.

SC544 Iron Bar Weights, for use with rough balances.

				$\frac{1}{2}$ to 4	7	14 lbs.
Price per set	....	....		d 6/-	d 10/-	d 21/-

SC546 Kilogramme Weights, iron hexagonal with ring for lifting.

Weight	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{1}{2}$	1	2	5	10	kilos.
	d 7d.	d 9d.	d 1/3	d 2/-	d 3/-	d 6/6	d 11/-	each.

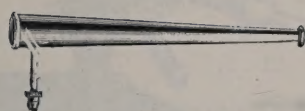


SC548

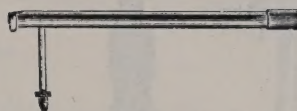
SC548 Weights, flat iron, unstamped, in sets.

4 oz. to 1 lb.	2 lbs.	4 lbs.	7 lbs.
d 3/-	d 4/-	d 6/-	d 8/- per set.

SECTION II c. Blowpipes and Accessories.

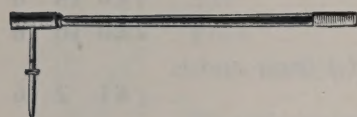


SC600

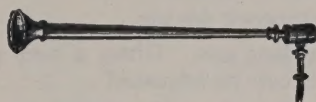


SC602

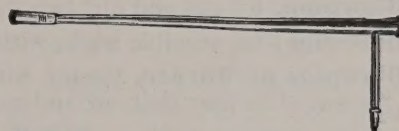
- | | | | |
|-------|--|---------------------|----------|
| SC600 | Blowpipe, Black's, mouth, japanned tin with screwed nozzle | each 6d. ; per doz. | a £0 5 0 |
| SC602 | Blowpipe, improved, brass, with vulcanite mouthpiece | „ 1/9 ; „ | a £1 0 0 |



SC604



SC606



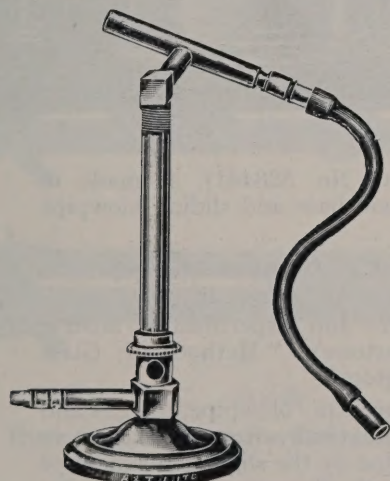
SC608

- | | | | | |
|-------|--|------|----------------------|----------------|
| SC604 | Blowpipe, mouth, best nickel-plated, bone mouthpiece | .... | each, 2/6 ; per doz. | a £1 7 6 |
| SC606 | Blowpipe, with platinum nozzle screwed to fit | .... | .... | each d £1 10 0 |
| SC608 | Blowpipe, mouth, brass, with bone mouthpiece | .... | each, 2/3 ; per doz. | a £1 5 0 |

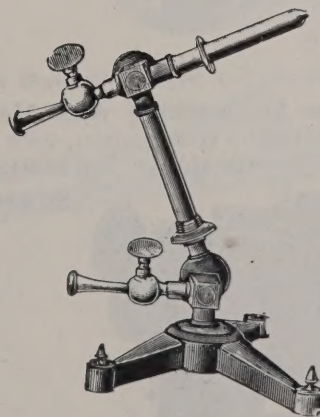


SC610-SC612

- | | | | | |
|-------|-----------------------------------|------|----------------------|----------|
| SC610 | Blowpipe, nickelled brass, 6½ in. | .... | each, 8d. ; per doz. | c £0 7 9 |
| SC612 | Blowpipe, nickelled brass, 8½ in. | .... | „ 9d. ; „ | c £0 8 6 |



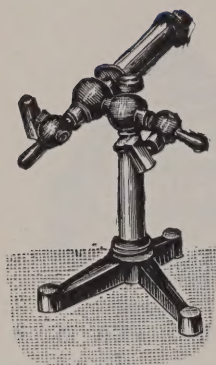
SC616



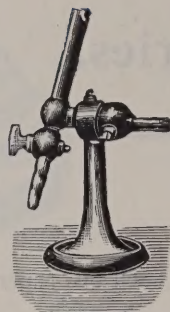
SC618

- | | | | |
|-------|--|------|-----------|
| SC616 | Blowpipe, Herapath's, with india-rubber tube and mouthpiece, to fit on to Bunsen burner. Price without burner | .... | b £0 6 6 |
| SC618 | Blowpipe, brass, on universal joint, adjustable to any position, two stopcocks, and with two extra jets screwed on to sole | .... | a £0 18 6 |

Blowpipe Sets, see Section VIII.



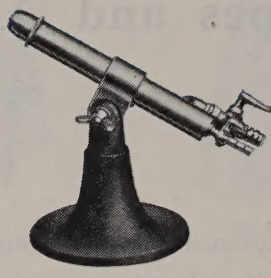
SC622



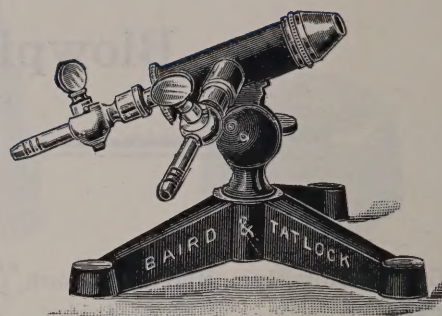
SC623



SC624

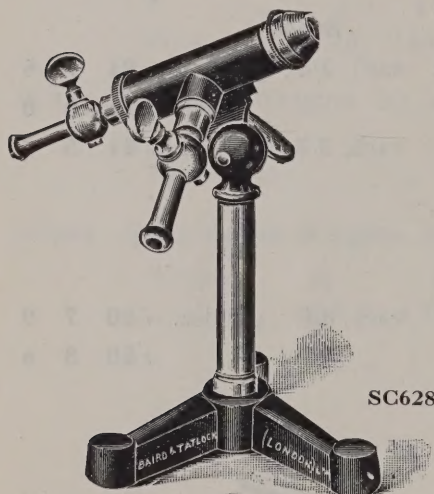


SC625

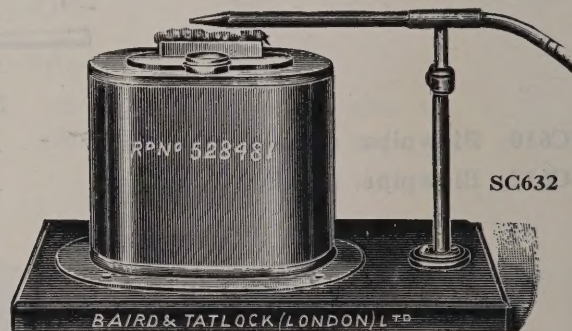


SC626

SC622	Blowpipe, for gas and air, two stopcocks, for general work	....	....	....	b £0 18 0
SC623	Blowpipe, for crucible work, with one stopcock for air	....	....	....	d £0 10 6
SC624	Blowpipe or Burner, for use with acetylene gas. Gives a very powerful flame and is arranged so that both air and gas inlets can be adjusted	....	....	....	g £1 2 6
SC625	Blowpipe for Silverlite Petrol Gas, consumption from 30 to 90 cubic ft. per hour	....	....	....	d £2 10 0
SC626	Blowpipe, glassblowers' pattern, for use with glass jets of various sizes, which can be changed without putting out gas flame	....	....	....	b £0 17 6

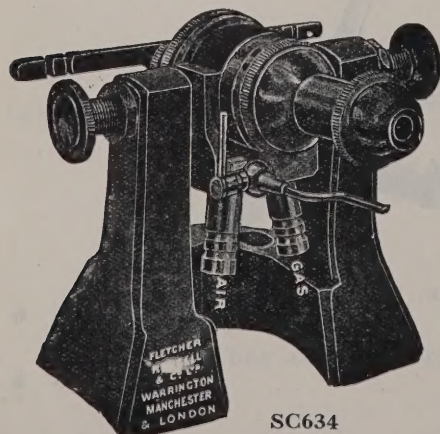


SC628



SC632

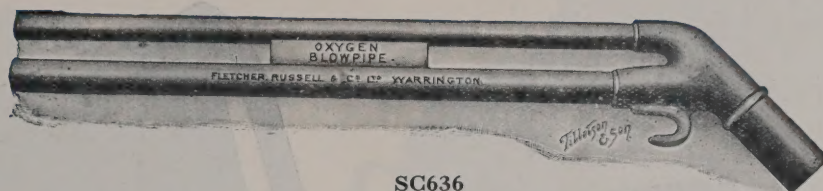
SC628	Blowpipe, as No. SC626, on brass pillar, height 4 in.	....	....	....	b £0 18 6
SC632	Blowpipe for working with Methylated Spirit (Regd. No. 528481), as made to Col. Aldridge's specification, with copper reservoir on wood base and sliding blowpipe jet for use with blower, No. SC648	....	....	....	d £1 17 0
SC634	Blowpipe, Fletcher's Compound, improved pattern	....	....	....	d £4 0 0



SC634

For glassworkers and experimental laboratories (see Shenstone's "Method of Glass Blowing" (Rivingtons).

A double concentric blowpipe, the gas and air changing automatically from the larger to the smaller blowpipe by the slight movement of the lever at the back, the same movement also adjusting both gas and air to each other for each blowpipe, giving the fullest and most instantaneous control over the character and size of the flame, without necessitating the use of the hand, the two blowpipes being perfectly concentric.

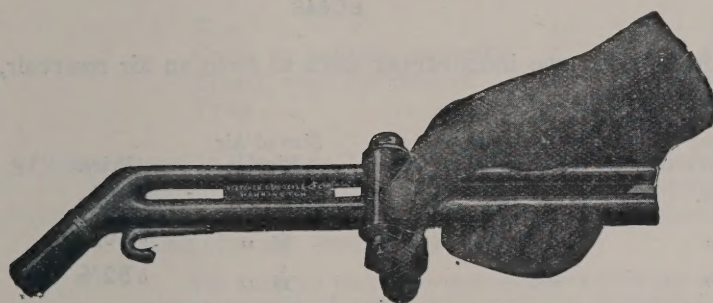


SC636

SC636 Blowpipe, Fletcher's Oxygen, for use with compressed oxygen.

No.	....	....	....	7	20	40
Oxygen, per hour	....	....	....	7	20	40 cubic ft.
Gas supply	....	....	....	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{2}$ in.
Size	....	....	....	$9\frac{3}{4}$	12	$14\frac{1}{2}$ in.
Price	....	....	....	d 9/-	d 12/6	d 16/6
Price with stopcock	....	....	....	d 24/-	d 25/-	d 27/6

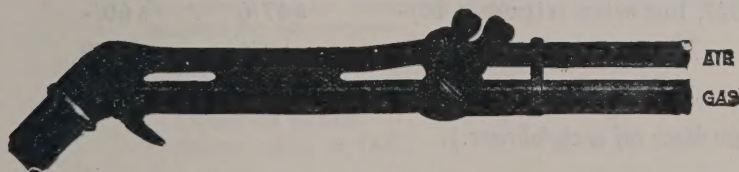
The blowpipes are totally useless for coal gas and air; they are specially designed for use with compressed oxygen only.



SC638

SC638 Blowpipe, Fletcher's Automatic. Pattern C. Both gas and air are controlled simultaneously.

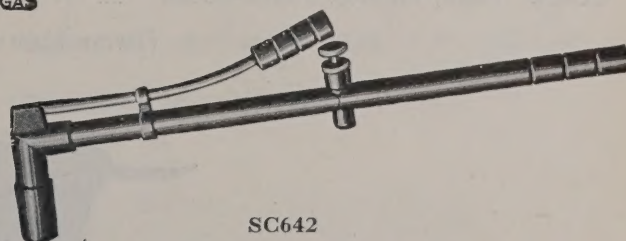
No.	....	....	C 10	C 40
Size	....	....	$8\frac{1}{2}$	$12\frac{1}{2}$ in.
Gas supply pipe, bore	....	....	—	$\frac{1}{2}$ in.
Foot blowers, size required	....	....	3	5
Price	....	....	d 17/-	d 25/-
Price on stand	....	....	d 25/-	d 37/6



SC640

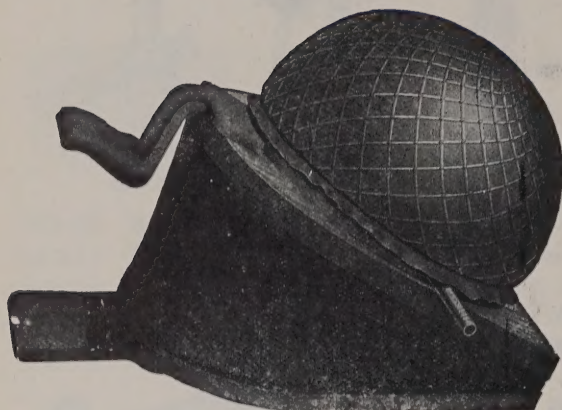
SC640 Blowpipe, Fletcher's Pattern, 8C.

No.	....	....	....	1	2	3	4
Size	....	....	....	$10\frac{1}{4}$	$12\frac{1}{2}$	19	$24\frac{1}{2}$ in.
Gas supply	....	....	....	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1 in.
Price without taps	....	....	....	d 10/-	d 13/6	d 32/6	d 62/6
Price with taps	....	....	....	d 19/6	d 25/-	d 45/-	d 83/-



SC642

SC642 Blowpipe for Petrol Air Gas d £1 5 0



SC644-SC647

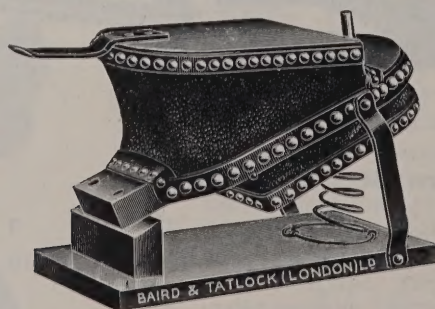


SC648

Foot Blowers. These foot blowers are fitted with two india-rubber discs to form an air reservoir, which gives an almost steady air pressure.

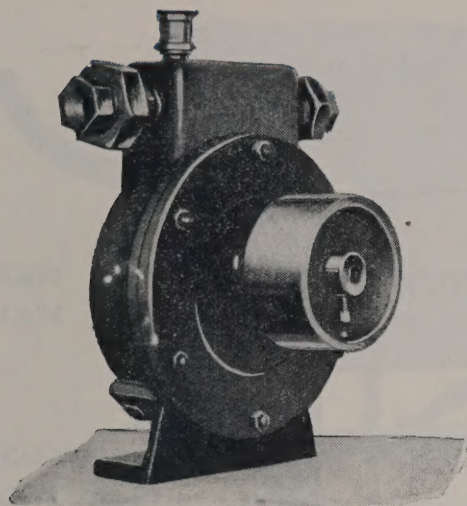
	Size.	Diameter of Air Reservoir.	Pressure in Ounces.	Size of Air Pipe.	Price.
SC644	Foot Blower, No. 3	 8 in.	20 oz. sq. in.	$\frac{7}{16}$ in.	b 35/-
SC646	Foot Blower, No. 5	 10 "	20 " "	$\frac{7}{16}$ "	b 40/-
SC647	Foot Blower, No. 7	 12 "	20 " "	$\frac{7}{16}$ "	b 52/6
			No. 3.	No. 5.	No. 7.
SC648	Foot Blowers, sizes as Nos. SC644-SC647, but with tripod		b 40/-	b 47/6	b 60/-
SC650	Rubber Discs, for Nos. SC644-SC648	....	each b 2/-	b 2/6	b 3/9
SC652	Nets, for Nos. SC644-SC648	....	" b 1/6	b 1/9	b 2/3

(Two rubber discs on each blower.)

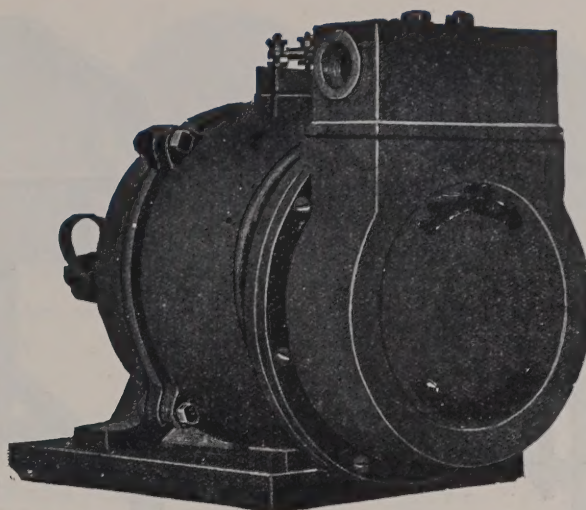


SC654

SC654	Foot Blower, double action, as illustrated	8"	10"	12"	16"
	Price	....	....	....	....
		b £2 2 0	b £2 6 0	b £2 12 6	b £3 15 0



SC656



SC658

SC656 Belt-driven Blowers. We supply, where our clients prefer to drive by belt from their own shafting, a series of blowers of the same capacity as electric Blowers, No. SC658, belt-driven, fitted with pulley.

Size	....	....	....	1	2	3	4
Cubic ft. per min. capacity	....	....	....	2	10	15	20
Speed, revs. per minute	....	....	....	1650	1400	1250	1250
Price	....	....	....	f £5 0 0	f £7 10 0	f £10 0 0	f £15 0 0

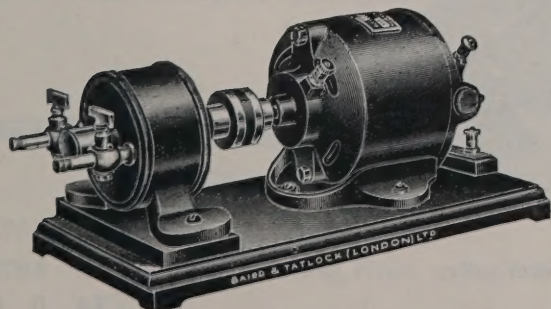
SC658 Electric Blowers, for gas forges, oil furnaces, laundry burners, heating and drying stoves, smiths' fires, brazing, grain cleaning, circulating gases and vapours, glass blowing, enamelling, brass and iron melting, gas exhausting, mixing and blowing air into fluids, dust blowing, dust separators.

The following table gives details of each stock size of blower at its normal working speed. Every blower is capable of giving a pressure of 5 lbs. per square inch, and of working continuously without undue friction, heating, noise, excessive lubrication, or waste of power. They are positive in action and will run steadily for years without repair. They are extensively used wherever a continuous steady blast of air is required, and are immensely superior to any other blower. They may be constructed of any size or material for any purpose.

Size	....	....	....	1	2	3	4	5
Cubic ft. per min. capacity	....	....	....	2.5	10	15	20	30
Power of Motor	....	h.p.	....	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{2}$
Price: A.C. or D.C.	....	....	....	f £12 10 0	f £18 10 0	f £22 10 0	f £30 0 0	f £37 10 0

When ordering, please state voltage, and whether alternating or continuous current.

For Pumps, see Section II m.

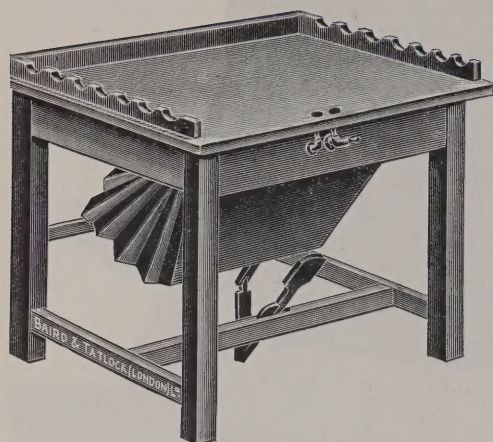


SC662

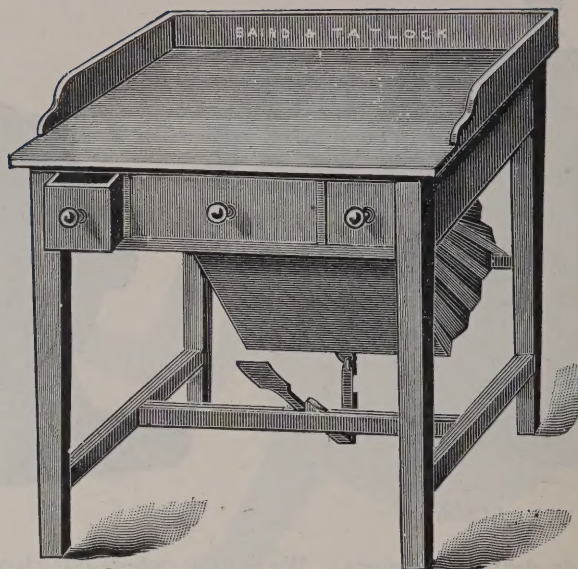
SC662 Miniature Blower, direct coupled to $\frac{1}{16}$ th H.P. electric motor, and mounted on heavy iron base plate. The blower has an output of approximately 0.75 cubic feet per minute and is capable of giving 7 lb. pressure or 15 in.-20 in. vacuum d £10 10 0

Please state voltage when ordering.

SC664 Miniature Blower, as above, with pulley, but without motor d £4 0 0

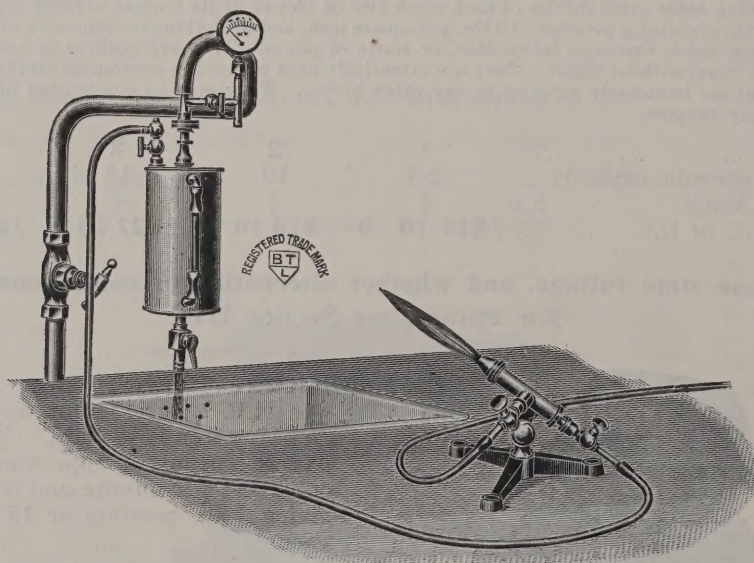


SC665



SC668

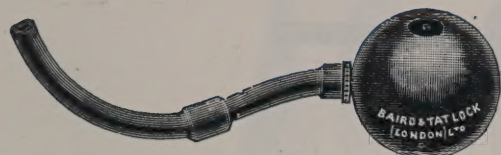
- SC665 **Blowpipe Table**, with double action bellows, birch ply top, size 24 in. $\times$ 30 in., suitable for glassblowing or other blowpipe work, fitted with air and gas nozzles on front rail d £6 7 6
- SC666 **Blowpipe Table**, with double action bellows, birch ply top, size 24 in. long $\times$ 30 in. back to front, suitable for glassblowing or other blowpipe work, fitted with air and gas nozzles on front rail. With bellows 10 in. across d £8 0 0
- SC667 **Blowpipe Table**, as above, size 30 in. long $\times$ 30 in. back to front. With bellows 12 in. across d £8 15 0
- SC668 **Blowpipe Table**, as above, size 36 in. long $\times$ 30 in. back to front. With bellows 15 in. across, complete with drawers as figured d £10 10 0



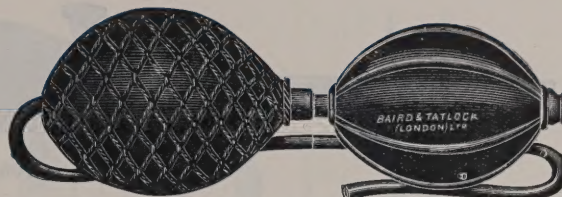
SC670

- SC670 **Blower, Water**, for operating blowpipe. Price of blower only.

A, with gauge	....	....	....	....	....	....	....	....	£4 0 0
B, without gauge	....	....	....	....	....	....	....	....	£3 0 0



SC672



SC674

SC672 Blowing Balls, of red india-rubber, about 100 ml. capacity, with valve, each 2/- ; per doz. a £1 3 0

SC674 Blowing Balls, best quality india-rubber, with net covered reservoir.

Diameter of reservoir when inflated	....	....	about 2½	3½ in.
Each	....	....	d 3/-	d 4/-
Per dozen	....	....	d 34/-	d 46/-

SC676 Blowpipe Charcoals, compressed, 7 × 3 × 3 cm. per doz. b £0 3 0

SC678 Blowpipe Charcoals, compressed, 15 × 3 × 3 cm. ,, b £0 6 0

SC680 Blowpipe Charcoals, natural, about 4 in. long and 1 in. thick ,, c £0 4 6



SC686



SC684



SC694



SC696



SC698



SC700

SC684 Charcoal Pastilles, for use with the blowpipe per doz. 1¼ ; per gross b £0 15 0

*SC686 Supports, Porcelain, for Charcoal Pastilles each 11d. ; per doz. b £0 10 6

*SC688 Charcoal Pencil each b £0 0 8

*SC690 Charcoal Saw ,, b £0 1 3

SC692 Cedarwood Spills per bundle 1/- ; per doz. bundles b £0 10 6

*SC694 Charcoal Borers, large, with handle each d £0 2 6

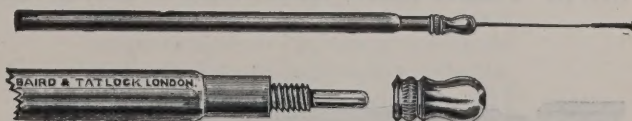
*SC696 Charcoal Borers, small, with handle ,, d £0 1 9

*SC698 Charcoal Borers, steel, small, with spatula end d £0 1 3

SC700 Clay Troughs, rectangular, 1 × ¾ in., for blowpipe work per doz. c £0 3 6



SC702



SC704

SC702 Holder for Platinum Wire each a £0 1 6

SC704 Holder for Platinum Wire, with aluminium handle, adapted for use with any size of wire each 1/6 ; per doz. a £0 17 6

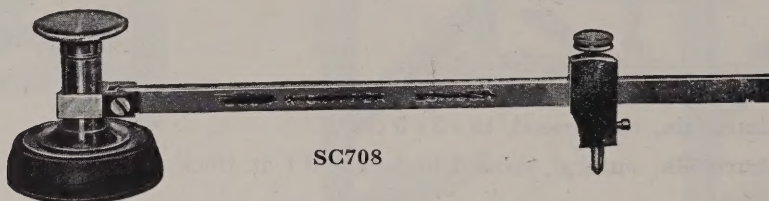
For other apparatus used in Blowpipe Analysis, see Assay Section VIII.



SC706

SC706 Hand Machine, for cutting glass tubing, sizes 18 in., 24 in., 30 in., and 36 in.

Quality	....	A	B	C	D
Price, either length	....	c 42/-	c 37/6	c 32/6	c 27/6 each.

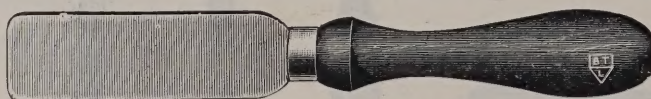


SC708

SC708 Hand Machine, for cutting glass circles, with plate glass ; will cut circles up to 30 in. diameter, with best quality diamond

SC710 Ditto, for sheet glass

.... c £4 0 0
.... c £4 2 6

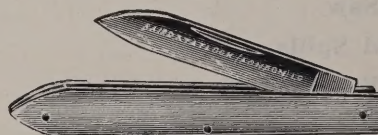


SC714

SC714 Knives, with handle (best quality), for cutting glass tubing each 1/6 ; per doz. a £0 17 0



SC716



SC718

SC716 Knife, for cutting glass tubing, etc., 7 x 4 cm., without handle each 1/- ; per doz. a £0 11 6

SC718 Pocket Knife, for cutting glass tubing, rod, etc., in bone handle each a £0 2 3



SC720

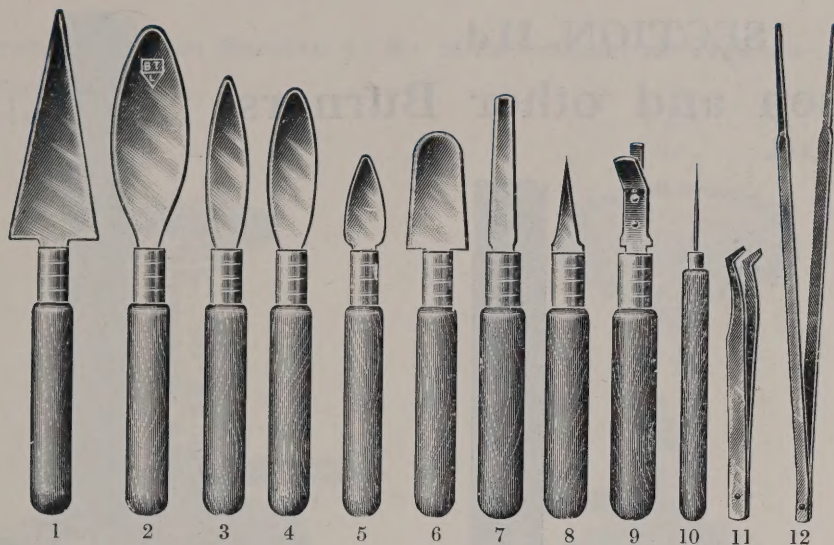


SC722

SC720 Diamonds, glaziers' (best quality) each b £1 1 0

SC721 Diamonds, glaziers' (2nd quality) ,, b £0 10 6

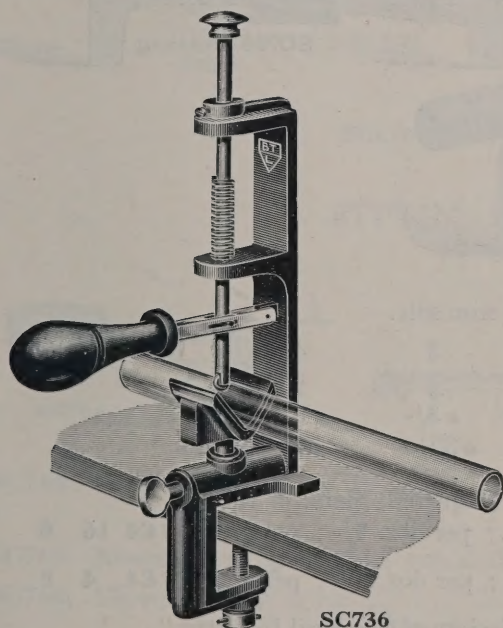
SC722 Diamonds, for writing on glass (best quality) ,, c £0 6 6



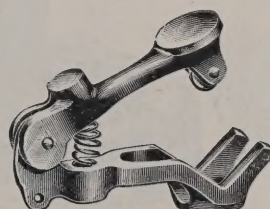
SC734

SC734 Set of Glass-working Tools.

1	2	3	4	5	6	7	8	9	10	11	12
d 1/9	d 2/-	d 1/6	d 1/6	d 1/9	d 1/6	d 1/6	d 1/9	d 2/-	d 9d.	d 2/-	d 2/6 each.



SC736



SC738

SC736 Glass-cutting Machine. Can be firmly mounted on the bench; gives true and accurate cut by pressing down lever and rotating the glass tube. Strongly made and well finished. Complete with clamp each d £1 17 6

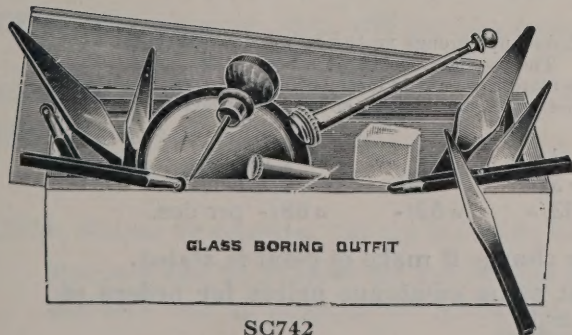
*SC738 Hand Glass-cutting Machine For tubes up to 17 mm., 4/-; 30 mm. d £0 6 0

*SC739 Spare Wheels for ditto per doz. d £0 5 0

SC740 Carborundum Hone, coarse, for glass-cutting knives each d £0 5 6

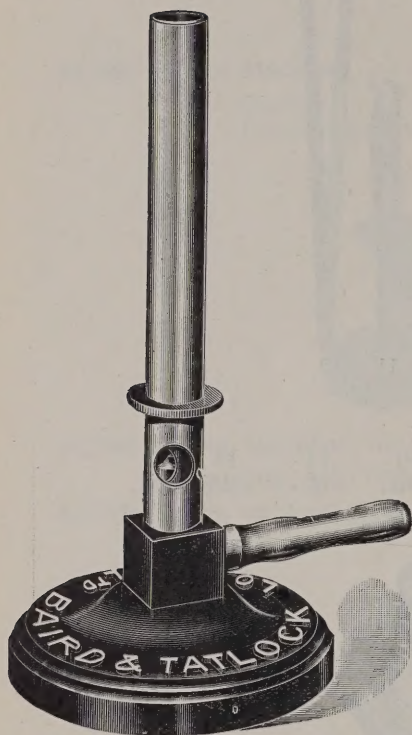
SC742 Glass Boring Outfit, complete with three $\frac{3}{8}$ in. pointed drills, three wheel cutter drills, two $\frac{3}{4}$ in. drills, one dozen spare wheels, one dozen spare spindles, small punch, can for solution, and camphor. Complete in wooden box with directions for use d £0 12 6

This outfit, which will bore a $\frac{1}{4}$ in. hole in $\frac{1}{4}$ in. plate glass in 2½ minutes, is the result of long experiments with special steel and special points, and by using the outfit in accordance with the instructions glass boring is made a simple and rapid process. The drills may be sharpened from time to time on an ordinary emery wheel or whetstone, and so made to last almost indefinitely.

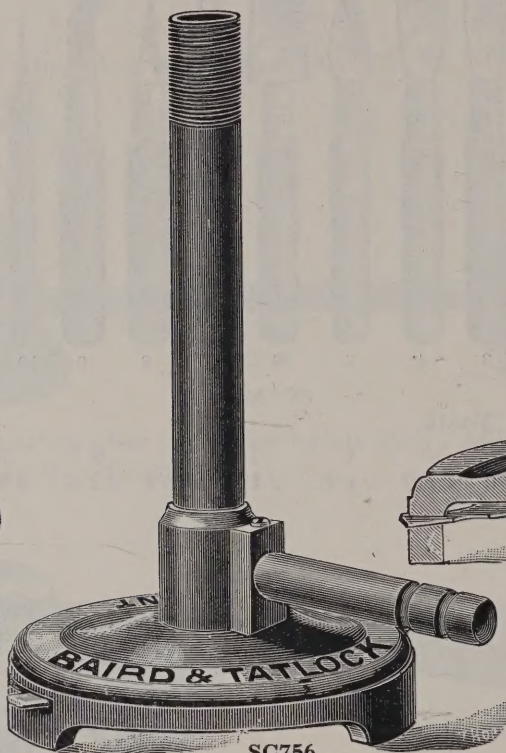


SC742

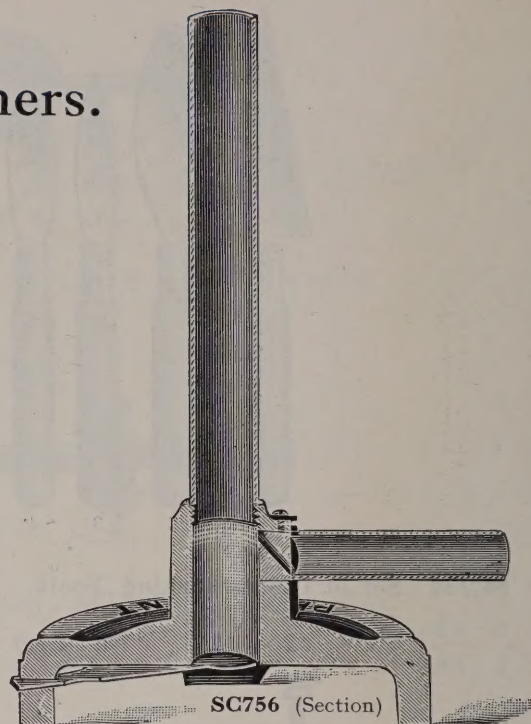
GLASS BORING OUTFIT

SECTION II d.
Bunsen and other Burners.

SC750



SC756



SC756 (Section)

SC750 Bunsen Burners, with tube and air regulator of brass, on iron sole.

Size No.	1	2	3	4
Outside diameter of tube	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$ in.
Price	a 1/6	a 1/9	a 3/-	a 5/- each.
„	a 16/6	a 20/-	a 32/-	a 57/- per doz.

SC752 Bunsen Burners on pressed iron base, brass tube bright lacquered, diam. of tube, $\frac{7}{16}$ in., with regulator.... each 10d.; per doz. 9/-; per gross d £4 16 0

SC754 Bunsen Burner, as above, without regulator each 9d.; per doz. 8/-; per gross d £4 4 0

SC756 Dr. Marshall's Bunsen Burners. (See "Journal of the Society of Chemical Industry," 16, 395 (1897).)

The great advantage is that they have no central gas jet to become choked up through matter falling down tube, the gas issuing from a hole in brass plug in gas leading tube (see section). The regulator is simply a brass stamping, and works beneath base; in this position it cannot become fixed, as the regulators are apt to do in ordinary Bunsens.

A large number have been supplied to various Universities and Institutions, etc., and have given entire satisfaction, being invariably chosen in preference to the old form.

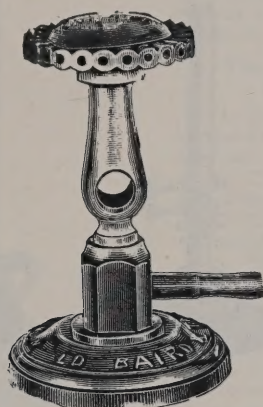
Diameter of tube, outside	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$ in.
Price	a 2/6	a 3/-	a 4/6	a 6/- each.
„	a 27/6	a 33/-	a 52/-	a 68/- per doz.

Burners can be adapted for Petrol Gas at an extra charge if make of plant is stated.

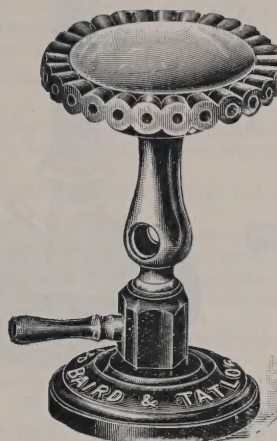
Burners can be adapted for Mansfield Oil Gas at same catalogue prices for orders of twelve and upwards.

SC758 Dr. Marshall's Bunsen Burners, as No. SC756, without air regulator.

Sizes	....	....	....	....	....	$\frac{7}{16}$	$\frac{1}{2}$ in.
Price	....	....	....	....	....	a 2/3	a 2/9 each
"	....	....	....	....	....	a 26/-	a 31/6 per doz.



SC760A



SC760B

SC760 Bunsen Burners, rose tops of cast brass, mounted on iron sole, total height $5\frac{1}{4}$ in.

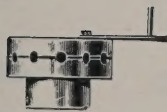
						A	B
Diameter of rose top	....	....	....	....	....	2	3 in.
Price	....	....	....	....	....	a 4/-	a 5/6 each.
"	....	....	....	....	....	a 46/-	a 63/- per doz.

Micro Bunsen Burners, see No. SC792 *et seq.*

FITTINGS FOR BUNSEN BURNERS.



SC764



SC766



SC768



SC770



SC772



SC773

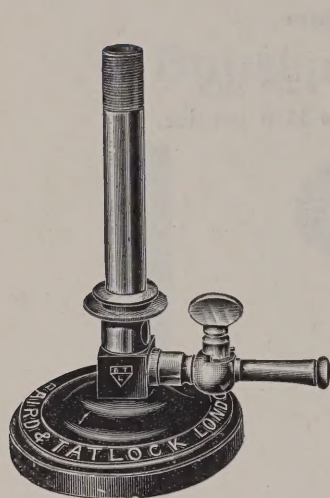


SC774

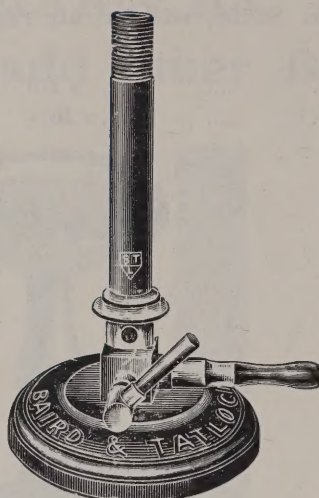
			For	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$ in. burners.
SC764	Iron Roses, closed at top	....		a 10d.	a 1/4	a 1/9	a 2/3 each.
				a 9/6	a 15/-	a 19/-	a 25/- per doz.
SC766	Roses, brass, open at top, with sliding disc			a 1/8	a 2/4	a 3/-	a 3/4 each.
SC768	Blowpipe, slot or jet	....		a 4d.	a 6d.	a 8d.	a 1/- each.
				a 3/9	a 5/6	a 7/6	a 11/- per doz.
SC770	Star Support, brass, with clamping screw			a 9d.	a 1/-	a 1/4	a 1/6 each.
				a 8/6	a 11/-	a 15/-	a 17/- per doz.
SC772	Chimney, of stout iron sheet	....		a 3/-	a 3/-	a 3/6	a 4/- "
SC773	Chimney, with clamping screw for fixing to burners	....		a 2/-	a 2/-	—	— each.
					For	$\frac{7}{16}$	$\frac{1}{2}$ in. burners.
SC774	Flame Spreaders, flat top iron to fit Bunsen burners				a 2/6		a 3/- each.

Burners can be adapted for Petrol Gas at an extra charge if make of plant is stated.

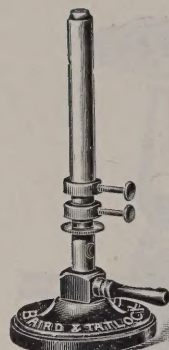
Burners can be adapted for Mansfield Oil Gas at same catalogue prices for orders of twelve and upwards.



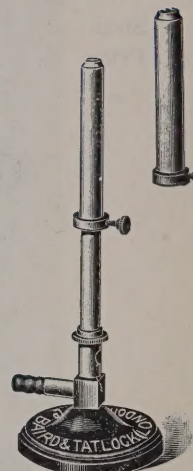
SC776



SC778



SC780



SC776 Bunsen Burners, with stopcock and regulator, best finish.

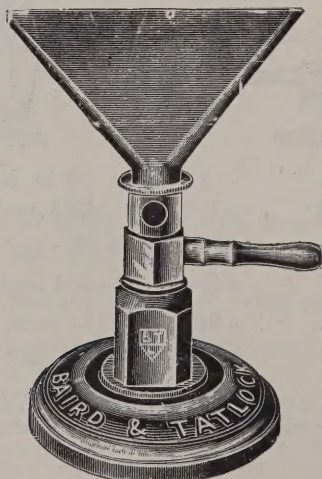
Outside diameter of tube ....	....	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$ in.
Price ....	....	a 3/6	a 4/9	a 6/9 each.

SC778 Bunsen Burners, with by-pass lever stopcock for self-lighting jet.

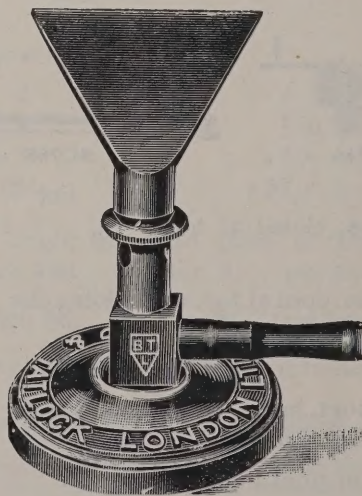
Outside diameter of tube ....	....	....	$\frac{1}{2}$	$\frac{5}{8}$ in.
Price ....	....	....	a 5/6	a 6/- each.

SC780 Bunsen Burner, with two adjustable extensions and air regulator, so that the flame can be brought at will to the required length; lowest height of burner, 6 in.; extreme height of burner, 12½ in. each a £0 6 0

SC782 Bunsen Burner, as above, with one extension tube; minimum height of burner, 6 in.; maximum height, 9¼ in. each a £0 5 6



SC784



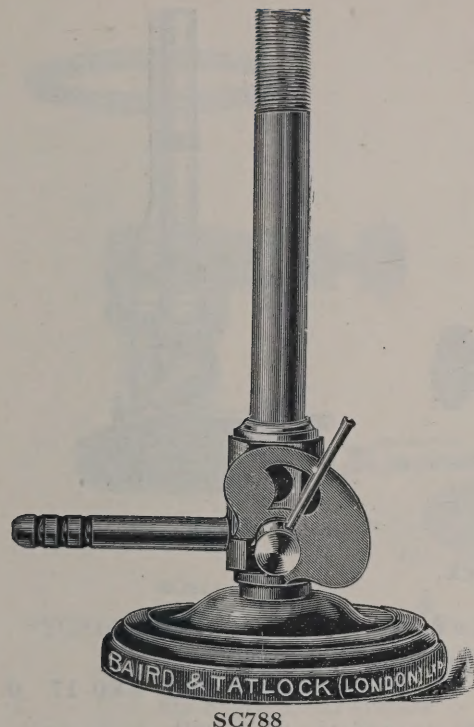
SC786

SC784 Bunsen Burners, with broad flame for heating tubes, width across top 4 in. each a £0 7 6

SC786 Bunsen Burners, ½ in. tube, with broad flame adapter screwed to fit, width 2 in., for heating tubes, etc. each a £0 5 0

Burners can be adapted for Petrol Gas at an extra charge if make of plant is stated.

Burners can be adapted for Mansfield Oil Gas at same catalogue prices for orders of twelve and upwards.



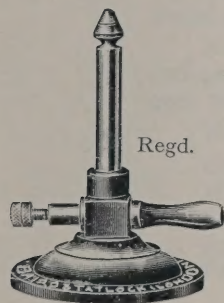
SC788

SC788 The "Sparsam" Burner, as devised by Dr. G. H. Pethybridge, late of the Royal College of Science, Dublin each 6/6 ; per doz. a £3 15 0

This is a new and greatly improved pattern of Bunsen burner, designed specially for the bacteriological work-table and suitable for general laboratory use. It is provided with a special stopcock, by means of which the air and gas are simultaneously regulated and the necessity for a special by-pass jet is done away with.

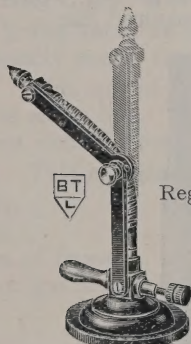
The following are some of the special advantages of this burner :

1. Any size of flame, either luminous or non-luminous, can be immediately obtained by merely turning the stopcock, one hand only being required.
2. The flame can be turned quite low without being extinguished, and without catching back.
3. The minimum luminous flame serves as a by-pass jet, thus rendering a special jet and its regulating screw superfluous.
4. The burner can only be completely extinguished by turning off the tap on the laboratory bench, thus avoiding diffusion through the rubber tube when the burner is not in use.
5. The mechanism of the burner is exceedingly simple and strong, so that it will stand continuous wear.
6. A great saving of gas is effected, as when not actually in use the burner is turned low ; the atmosphere of a laboratory in which many of these burners are in use will become considerably less unpleasantly heated than is usually the case.



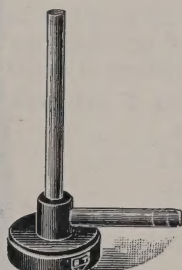
SC792

Regd.

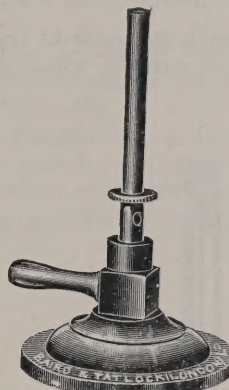


SC794

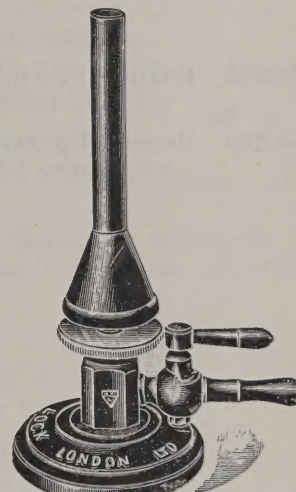
Regd.



SC796-SC798



SC800



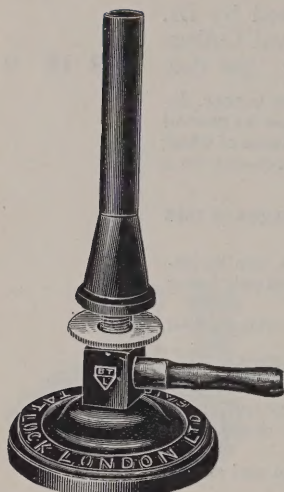
SC802

- SC792 B.T.L. Micro Burner.** A new type of burner, specially suitable for micro-chemical work. Gives a pointed non-luminous flame about 2 inches high which, by means of a fine adjustment valve, can be reduced to the size of a pin's head. A very convenient burner for small glass-blowing operations, *e.g.* drawing off fine capillary tubes, etc. each d £0 6 6
- SC794 B.T.L. Micro Burner**, as SC792, but with adjustable burner tube which can be set to any angle from 45° to the vertical. We recommend this type when it is required to keep the work in an upright position, *e.g.* in sealing off ampoules, etc. each d £0 8 6
- SC796 Bunsen Burners, Micro.**, $\frac{1}{4}$ in. brass tube, on iron base, without air regulator ,, a £0 1 0
- SC798 Bunsen Burners, Micro.**, $\frac{1}{4}$ in. tube, for brewers' forcing trays, etc., all brass, best finish ,, a £0 4 0
- SC800 Cambridge Micro Bunsen Burner.** $\frac{3}{16}$ in. brass tube on heavy iron sole, with ordinary size nozzle for $\frac{1}{4}$ in. I.R. tubing each 1/6 ; per doz. d £0 17 0
- SC802 Bunsen Burners (Teclu pattern)**, with air regulating cone and disc for varying temperatures, fitted with lever gas taps.

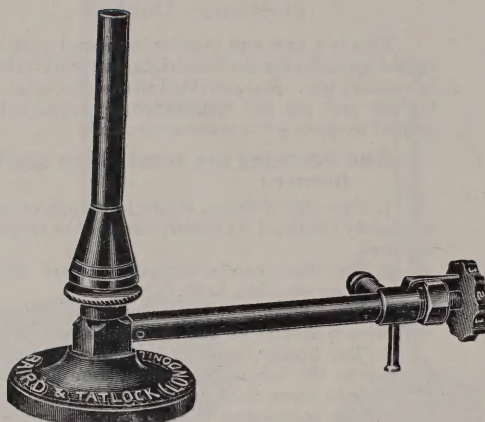
Size	....	....	....	....	....	....	$\frac{1}{2}$ in.	$\frac{5}{8}$ in.
Price	....	....	....	....	....	....	a 5/6	a 6/- each.

Burners can be adapted for Petrol Gas at an extra charge if make of plant is stated.

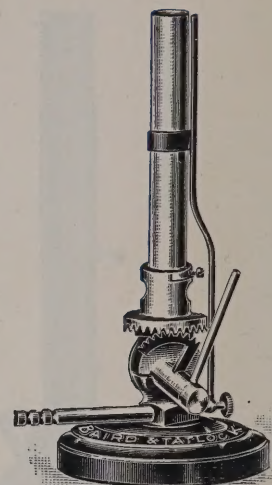
Burners can be adapted for Mansfield Oil Gas at same catalogue prices for orders of twelve and upwards.



SC804



SC805



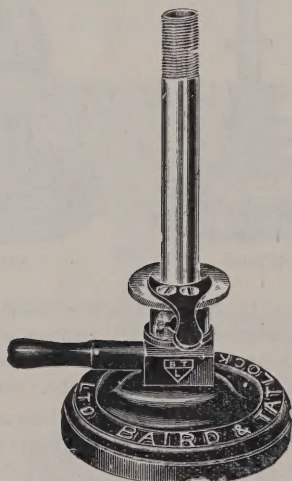
SC806

SC804 Bunsen Burners (Teclu pattern), as SC802, without stopcock.

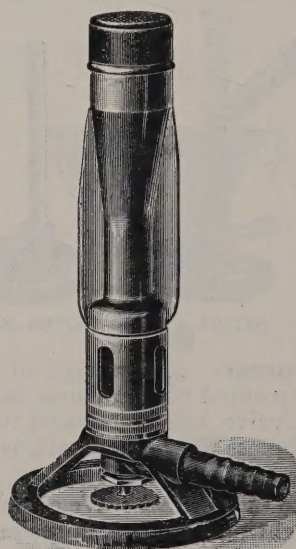
Size	....	....	....	....	....	....	$\frac{1}{16}$ in.
Price	....	....	....	....	....	d 2/9	d 3/3 each.

SC805 Burner, with micrometer adjustment and divided head. The long inlet tube enables the gas to be regulated from outside a screen each d £0 17 0

SC806 Bunsen Burners, with stopcock to regulate simultaneously the gas and air, fitted with self-lighting jet fixed outside, which can be adjusted to any required size each d £0 15 0



SC808



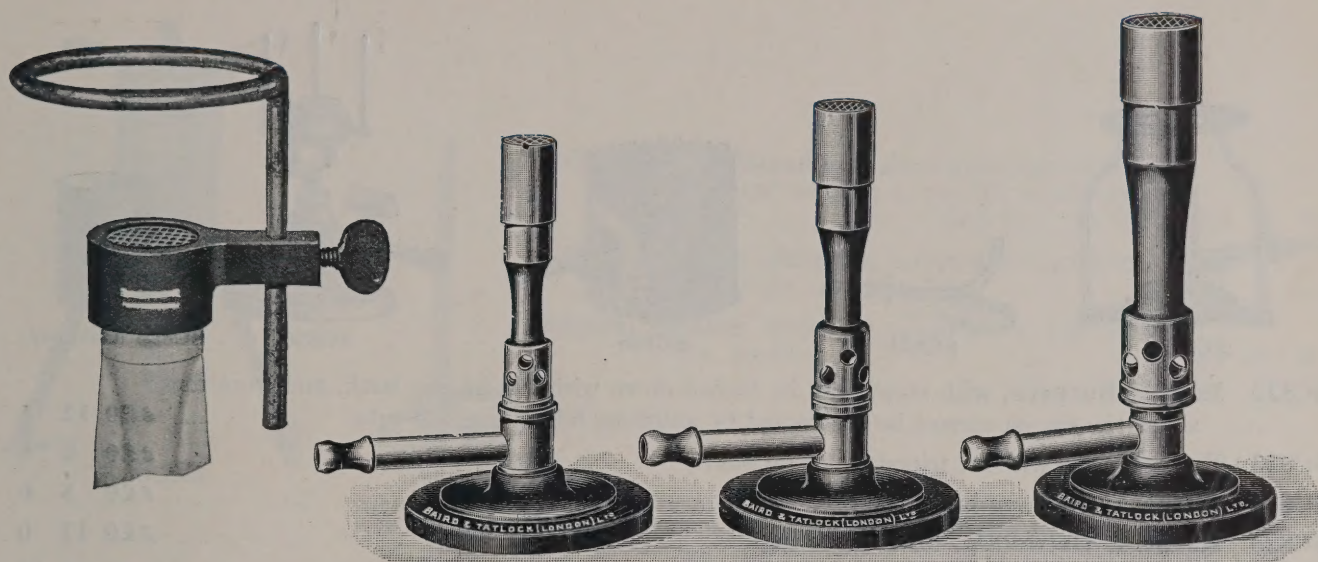
SC812

SC808 Bunsen Burners, Finckner's, with lever regulator, for the simultaneous adjustment of air and gas, $\frac{1}{2}$ in. each d £0 8 6

*SC812 Fisher Burner. Produces a flame of the maximum temperature without blast or can be adjusted for a Bunsen flame. Will produce a Meker flame or a Bunsen flame. Burns any gaseous fuel except acetylene. Practically replaces the Blast Lamp d £0 15 0

Burners can be adapted for Petrol Gas at an extra charge if make of plant is stated.

Burners can be adapted for Mansfield Oil Gas at same catalogue prices for orders of twelve and upwards.



SC814

SC816

***SC814 Apparatus Support for Fisher Burner.** (Patent applied for.) The apparatus support fits over the top of the burner and carries an adjustable ring support. This ring has an outside diameter of $3\frac{1}{8}$ in. and will accommodate crucibles, beakers, flasks, etc. Also fits Fisher Blast Burner

d £0 3 2

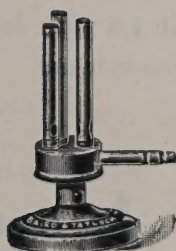
SC816 Bunsen Burners, for work at high temperature. (Meker pattern).

No. 1 is the smallest size and is useful whenever one requires a small but very hot flame. It is found especially useful for sealing glass bulbs, pipettes, etc.

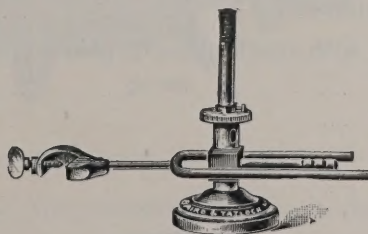
No. 2. This can be compared to the ordinary Bunsen burner as regards its uses, though the gas consumed is much less. Its hot and uniform flame permits of the rapid heating of flasks, test-tubes, etc., without risk of breakage. Glass is readily worked with this burner.

No. 3. This is a size larger than No. 2, and is used for similar work.

Size No.	1	2	3	4
Height	115	130	155	190 mm.
Section of flame	16	20	24	30 "
Approx. gas consumption per hour	2.8	3.9	6.4	10.5 cub. ft.
Price	d 4/6	d 5/-	d 6/6	d 10/6 each.



SC818



SC820

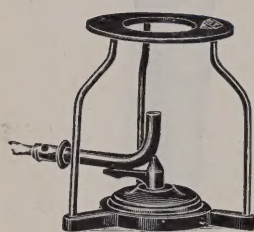


SC821

SC818	Bunsen Burners, with three tubes, $\frac{7}{16}$ in.	each	d £0 6 0
SC819	Bunsen Burners, with four tubes, $\frac{7}{16}$ in.	"	d £0 7 6
SC820	Bunsen Burners, $\frac{1}{2}$ in. tube, fitted to slide on forked clamp for retort stand	"	a £0 4 6
SC821	Burners, on stand, 10 in. high, with luminous flat flame for bending glass tubing or lighting purposes	each 1/9; per doz.	a £0 19 0

Burners can be adapted for Petrol Gas at an extra charge if make of plant is stated.

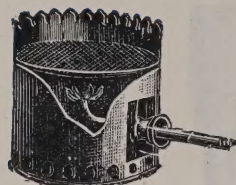
Burners can be adapted for Mansfield Oil Gas at same catalogue prices for orders of twelve and upwards.



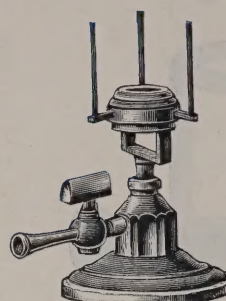
SC822



SC824



SC825

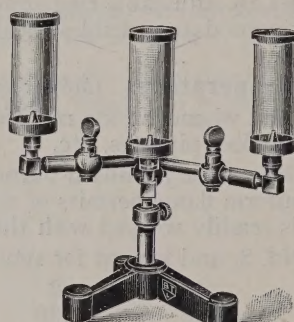
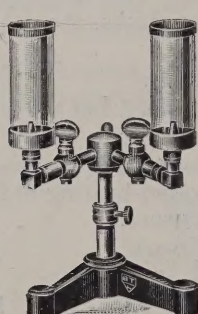
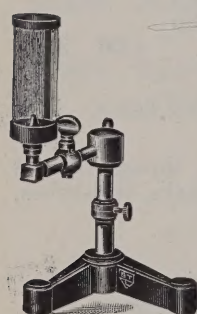


SC826

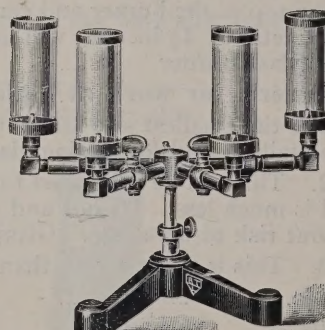


SC826 (Chimney)

SC822	Bunsen Burners, with stand, can be turned down without lighting back, and from its shape the gas jet cannot be obstructed by anything falling into the tube	....	....	d £0 12 6
SC823	Burner only, without tripod stand (SC822)	....	....	d £0 9 6
SC824	Burners, small, on brass sole	....	....	d £0 3 6
SC825	Burners, Ostwald's, for evaporating	....	....	d £0 12 0
SC826	Burners, Argand, with steatite top, stopcock and chimney for evaporating	....	....	d £0 16 0



SC827



SC829

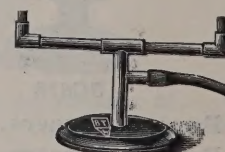
SC827	Gas Burner for Incubators, etc., on stand to raise or lower, stopcock to each jet and mica chimney	1	2	3	4 jets.
		f 13/-	f 21/-	f 32/-	f 42/- each.
SC828	Extra Mica Chimneys for above	....	....	....	each 1/6 ; per doz. b £0 17 0
SC829	Gas Burner for Incubators, with small luminous pointed flame and mica cylinder.				
	A. Without stopcock	....	....	....	each d £0 9 0
	B. With stopcock	....	....	....	„ c £0 11 0



SC830

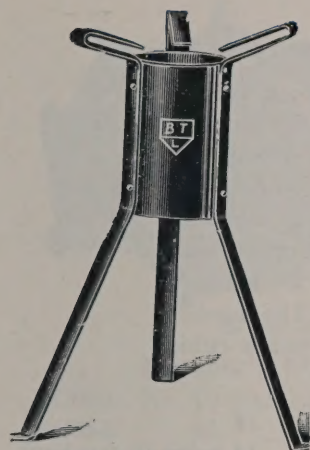


SC831



SC832

		Inside diameter of ring	3	4	5	6 3/4 in.
SC830	Ring Burner with Stopcock and Boss to fix to upright.	Price	b 12/-	b 13/-	b 14/-	b 18/- each
SC831	Ring Burner with Bosshead, but without stopcock.	„	b 9/6	b 11/-	b 12/-	b 16/- „
SC832	Small Double Burner, for keeping baths, etc., at a low temperature	....	....	....	....	d £0 7 6



SC836



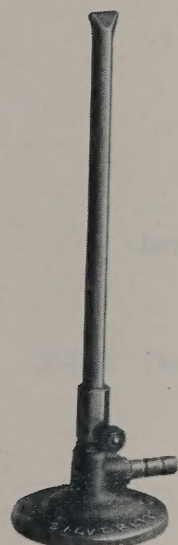
SC838

SC836 **Flame Steadiers**, sheet-iron cylinder with legs, and support at top, for sand trays, etc. each 2/- ; per doz. *a* £1 2 0

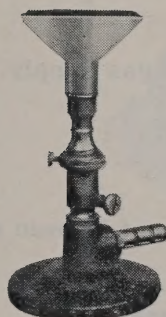
SC838 **Bunsen Burners**, adapted for acetylene gas, single *d* £0 7 6

SC839 **Bunsen Burners**, adapted for acetylene gas, double *d* £0 14 0

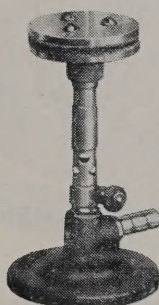
Burners for Silverlite Petrol Gas.



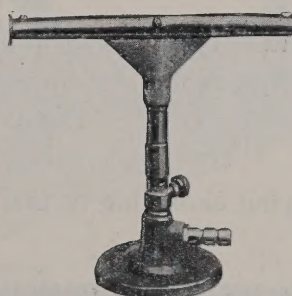
SC840



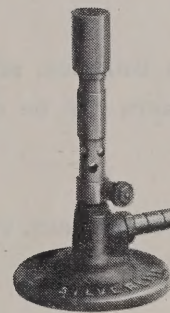
SC842



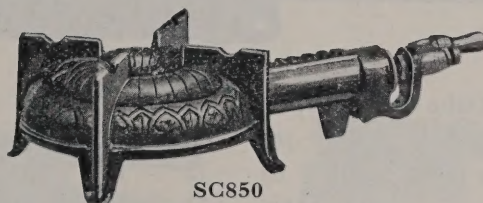
SC844



SC846

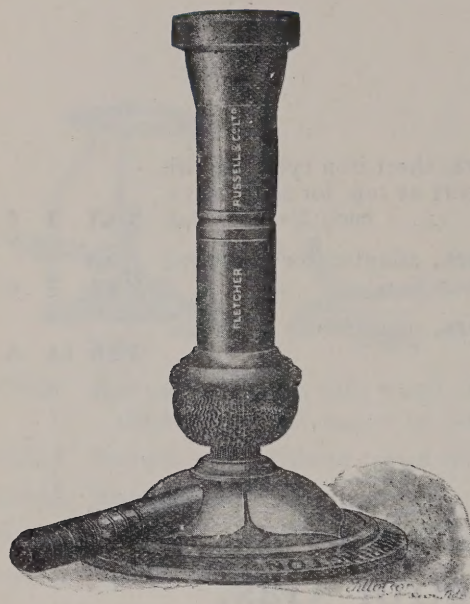


SC848



SC850

SC840	Batswing Burner.	Gas consumption 9 c. ft. per hour	....	....	....	....	....	<i>d</i> £0 3 6
SC842	Spreader Burner.	2½ in. long. Gas consumption 15 c. ft. per hour	....	....	....	....	....	<i>d</i> £0 9 0
SC844	Rose Head Burner.	2¼ in. diam. Gas consumption 25 c. ft. per hour	....	....	....	....	....	<i>d</i> £0 9 0
SC846	Ramsay Burner.	6 in. long. Gas consumption 30 c. ft. per hour	....	....	....	....	....	<i>d</i> £0 15 0
SC848	Bunsen Burner.	(A) Small. 6 c. ft. per hour	....	....	....	....	....	<i>d</i> £0 5 0
		(B) Medium. 10 c. ft. per hour	....	....	....	....	....	<i>d</i> £0 6 0
		(C) Large. 14 c. ft. per hour	....	....	....	....	....	<i>d</i> £0 7 6
SC850	Ring Burner	....	....	....	....	....	....	<i>d</i> £0 11 0



SC856-SC857

Fletcher's Patent Safety Bunsen, improved pattern.

These will be found as perfect as any upright tube burner can possibly be made, of the highest possible power for the size, can be turned down to the merest flicker without lighting back or smoke, and can be mounted on tubes in any form or number when very high powers are required. They are made in three sizes, all in brass, polished. The number gives the maximum gas consumption in cubic feet per hour at $\frac{1}{10}$ pressure.

No.	5	10	14
Burning	5	10	14 cubic ft. per hour.
Diameter across top of gauze ..	$\frac{7}{8}$	$1\frac{1}{4}$	$1\frac{1}{2}$ in.
Height, without stand	$3\frac{3}{4}$	$4\frac{3}{4}$	6 „
SC856 Price, without stand	d 3/6	d 4/6	d 5/6 each.
SC857 Price, on brass stand	d 6/6	d 9/6	d 10/6 „

NOTE.

All Bunsen Burners, etc. are sold adapted for burning usual Town gas supply.

These burners can be easily adapted for burning :

Oil gas and

Petrol gas

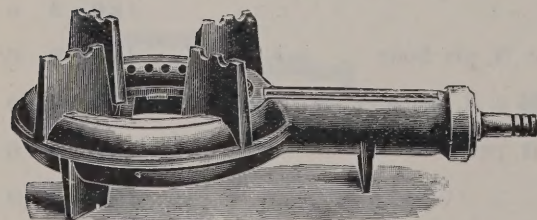
at a slight extra cost, varying according to the quantity and the type of Bunsen ordered.



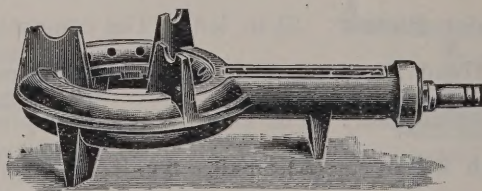
SC858

SC858 Fletcher's Cast-iron Tube Burners.

Length of flame	9	$10\frac{1}{2}$	$12\frac{3}{4}$	14	19	24	30	36	42 in. .
Gas consumption per hour	10	10	15	15	25	30	35	40	45 cub. ft.
Price	d 6/6	d 6/6	d 7/6	d 7/6	d 13/6	d 16/6	d 20/-	d 23/-	d 27/- each.



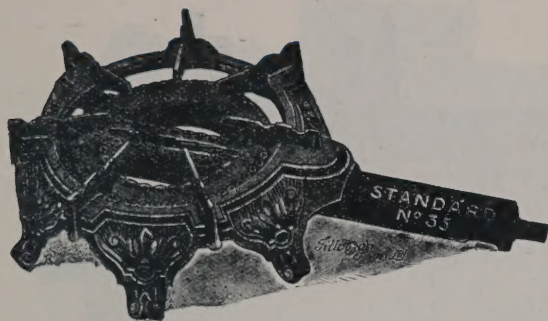
SC860



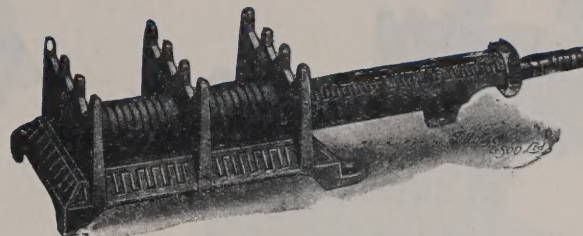
SC862

SC860 Gas Burners, $8\frac{1}{2}$ in. across support for vessel each a £0 5 0

SC862 Gas Burners, $4\frac{1}{4}$ in. across support for vessel „ a £0 2 0



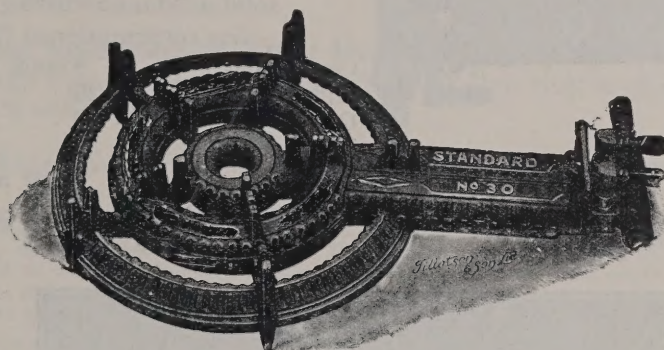
SC864-SC870



SC872

Fletcher's Standard Boiling Burners.

SC864	No. 10 Standard.	Diameter across support for vessels 5½ in.	....	....	each	d £0	3	4
SC866	„ 15	„ „ „ „ „ „ 7	....	....	„	d £0	5	0
SC868	„ 20	„ „ „ „ „ „ 8	....	....	„	d £0	7	6
SC870	„ 35	„ „ „ „ „ „ 10	....	....	„	d £0	19	0
SC872	Fletcher's Radial Burner, No. 10 S	....	....	....	„	d £0	4	6



SC874

SC874	Fletcher's Standard Burners, No. 30, two concentric burners with two separate taps	Diameter across support for vessels, 10 ins.				each	d £1	3	0
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(Fig. A)



(Fig. B)

SC876-SC878

Fletcher's Argand Burner.

A cheap, simple, and indestructible burner for small laboratory work.

The flame of these burners is shorter, more compact, and higher in temperature than an ordinary Bunsen, and is also free from smell.

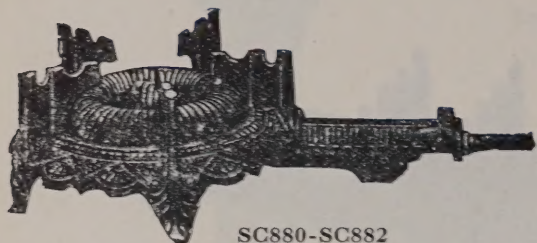
The air supply is self-adjusting.

The sizes given are the bore of the horizontal tube.

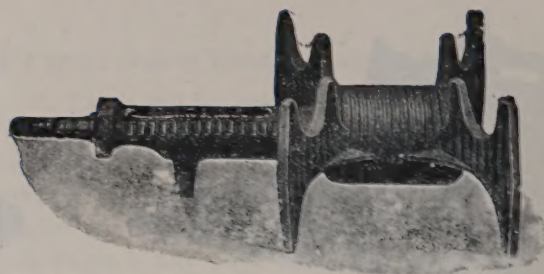
SC876	½ in. size, Gas consumption 3½ ft. per hour.	each	Fig. A. d 7/6	Fig. B. d 5/6
SC878	¾ in. „ „ „ „ „ „	„	d 9/6	d 6/6

Burners can be adapted for Petrol Oil Gas at an extra charge.

Burners can be adapted for Mansfield Oil Gas at same catalogue prices for orders of twelve and upwards.



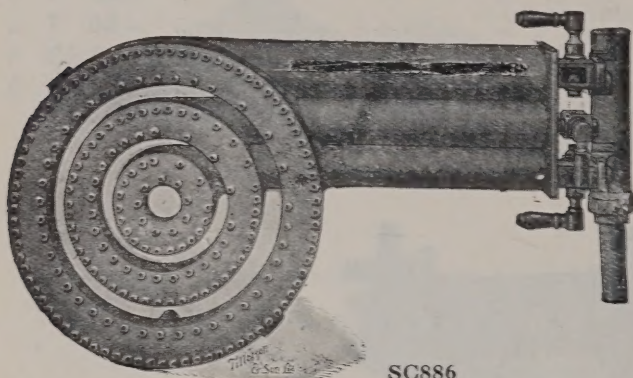
SC880-SC882



SC884

Fletcher's Patent Radial Burners.

SC880	Small size, S.R., maximum consumption 12 ft. per hour	....	....	....	d £0 8 0
SC882	Large size, L.R., maximum consumption 20 ft. per hour	....	....	....	d £0 10 0
SC884	Fletcher's Radial Burner, No. 8 R, maximum consumption 12 ft. per hour	....	....	....	d £0 4 3



SC886

SC886 Fletcher's Triple Concentric Burners.

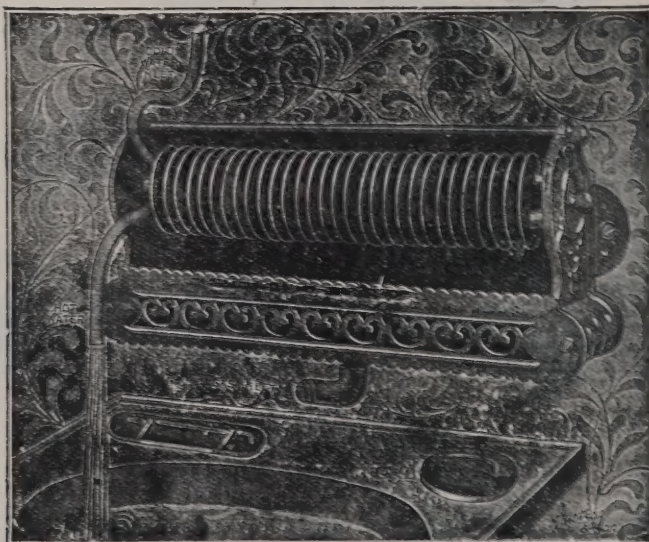
This is 8½ in. extreme diameter, and the three burners are in one solid substantial casting.

Gas consumption at $\frac{10}{16}$ pressure—

Centre ring	....	9	cubic ft. per hour.
Middle "	....	20	" "
Outer "	....	24	" "
The three combined	....	53	" "

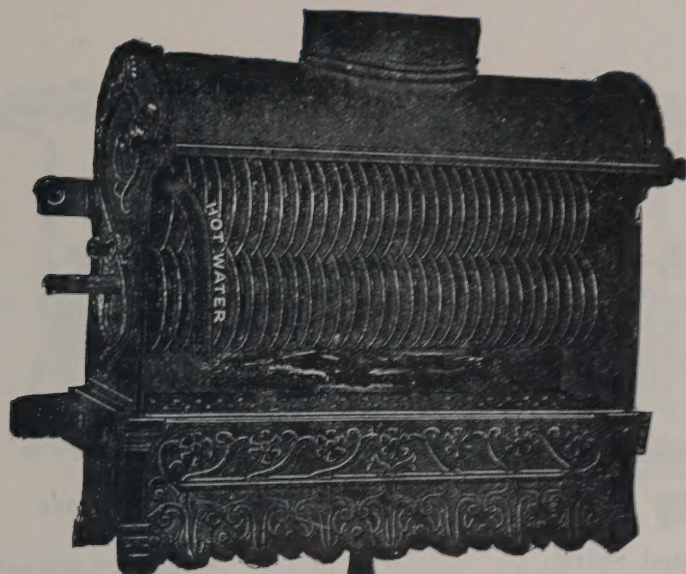
Price, as illustrated d £3 6 0

SC888	Separate Tripod Stand for use with above		extra	d £0 13 3
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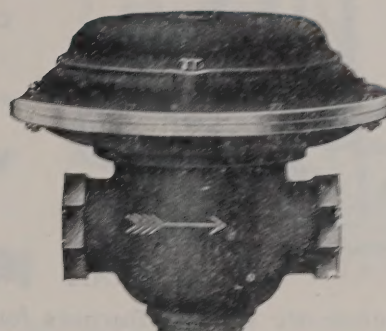


SC890

SC890	Fletcher's Instantaneous Water Heaters. Horizontal pattern, 14 x 6 in. over all. The inlet and outlet are made at the same end. This heater will deliver 1 quart of water per minute, heated from 60° to 125° F. Bronze Finish						d £2 12 6
SC892	Water Heater as above, but nickel-plated				....	....	d £3 10 0
SC894	Water Heater, special pattern for use with hard water. This pattern has the water tubes fitted with plugs at both ends to allow for the entire coil to be cleared inside from all deposits caused by hard or dirty water				....	extra	d £3 2 6



SC896



SC900

SC896 Fletcher's Patent Instantaneous Water Heaters, double pattern d £25 5 0

This is nearly double the power of small size SC890, but must be used connected to a good flue or in a well-ventilated room.

SC900 Gas Pressure Regulators, for equalising the supply and preventing waste and irregularity.

These Regulators are of single valve construction, but are so designed that a very accurate balance of valve is obtained by use of an auxiliary diaphragm and balance plate. The Balance Valve Principle is of utmost importance, in that it counteracts the effect of varying service pressure, so that the inlet pressure does not in any way affect the size of valve openings, therefore does not affect the outlet pressure. The valve and openings are designed to accommodate the maximum volume of the pipe, and are also capable of accurate regulation of a small volume.

The Regulators will maintain a uniform outlet pressure, regardless of variation of inlet pressure, so long as the inlet pressure is greater than the outlet. They will reduce inlet pressures up to 2 lbs. down to any outlet pressures from $1\frac{1}{2}$ " to 5".

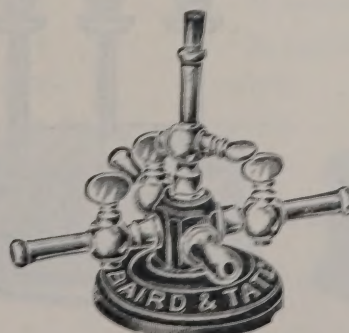
Various outlet pressures are obtained by lead weights on the diaphragm. With this method of loading, the pressure on the valve is the same in all positions, so ensuring a constant pressure on the outlet from the minimum to the maximum volume.

The Regulator is fitted with a removable top which permits the changing of weights for various outlet pressures.

For	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$ in. bore gas pipe
	d 20/-	d 24/-	d 29/6	d 40/-	d 50/-



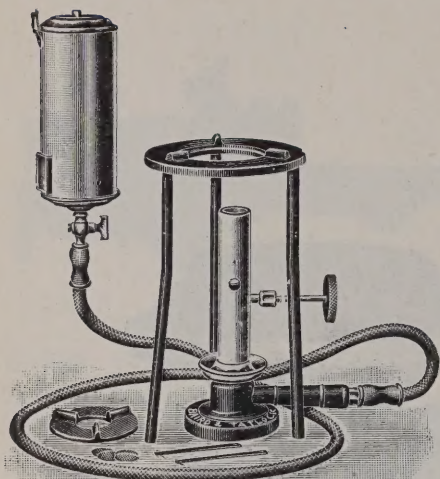
SC902



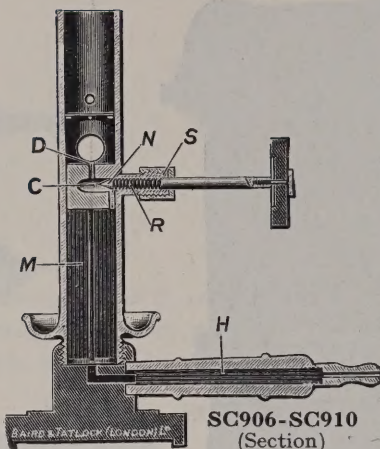
SC904

SC902 Gas Distributors, with inlet, and three stopcocks a £20 9 0

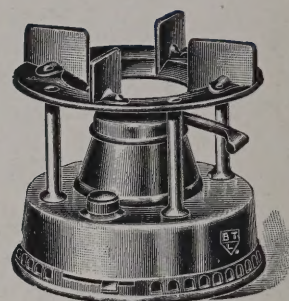
SC904 Gas Distributors, with inlet, and four stopcocks, the central stopcock being fitted with batwing burner for lighting purposes or bending glass tubes a £20 13 6



SC906-SC910



SC906-SC910
(Section)



SC914

Automatic Bunsen Burners for Methyated Spirit.

Each burner is complete with reservoir with tap, flexible metallic tubing 5 ft. long, iron tripod, pricker, and coarse and fine wire gauzes and instructions.

SC906	Flame about 5 in., equal to one gas Bunsen burner. Size No. 14	....	....	....	d £1 6 6
SC908	Flame about 8 in., equal to two gas Bunsen burners. Size No. 15	....	....	....	d £1 15 9
SC910	Flame about 10½ in., equal to four gas Bunsen burners. Size No. 15½	....	....	....	d £2 1 9
SC912	Star Burners, to suit Nos. SC906-SC910	....	....	....	each d £0 1 0
SC914	Methyated Spirit Lamp of Brass. Adjustable flame	....	....	....	d £0 17 6

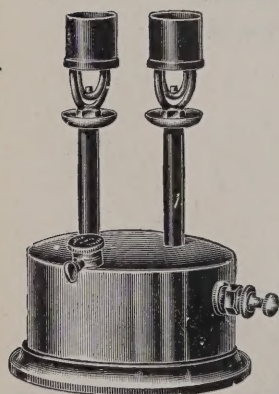
The combustion chamber consists of a perforated metal cone, surrounded by a cotton wick which is protected by an asbestos lining.

The wick requires no replacement or attention—the lining renders it indestructible even if the spirit is allowed to burn out.

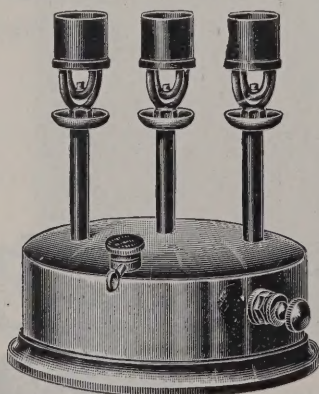
The air-control valve determines the supply of air to the combustion chamber.

The control in the base operates the air-control valve, and by this means the flame is turned up and down like gas. When turned full on it is so powerful that it will boil a quart of water in 6 minutes.

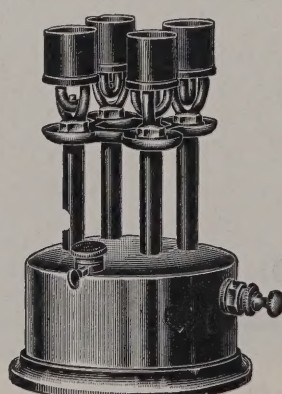
The kettle stand is combined with a reflector, and is separable from the lamp to facilitate cleaning.



A

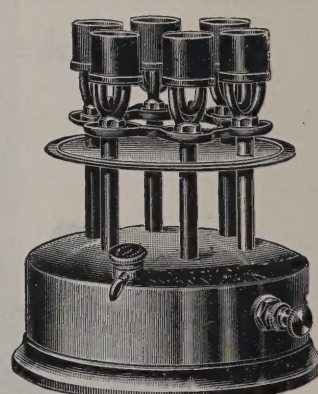


B



SC916

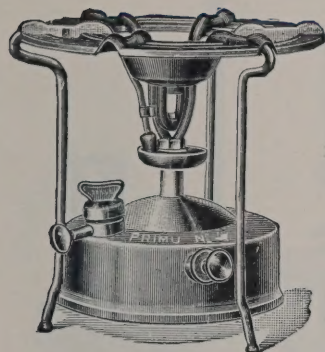
C



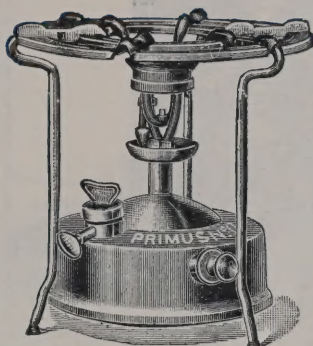
D

*SC916 Paraffin Oil Furnaces, wickless, made entirely of well-polished brass, perfectly smokeless.

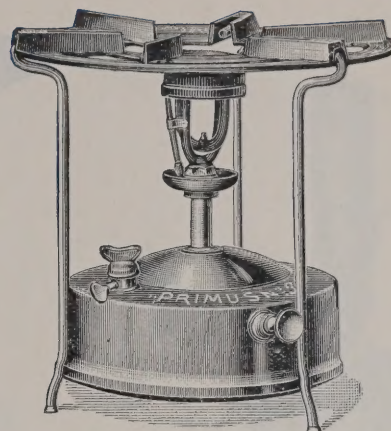
	Size A	B	C	D		Size A	B	C	D
No. of burners	2	3	4	6	Diameter	7¼	7¼	7¼	9½ in.
Capacity of oil tank	2½	2½	2½	7 pints.	Weight (about)	3½	4	4½	8½ lbs.
Height	12¼	12¼	12¼	12¼ in.	Price	d 21/-	d 24/6	d 29/-	d 47/-



SC918 "Primus" No. 4
(medium size)



SC920 "Primus" No. 0
(medium size)



SC922 "Primus" No. 2

*SC918 "Primus" Stoves, "Silent" pattern, fitted with stamped steel top ring.

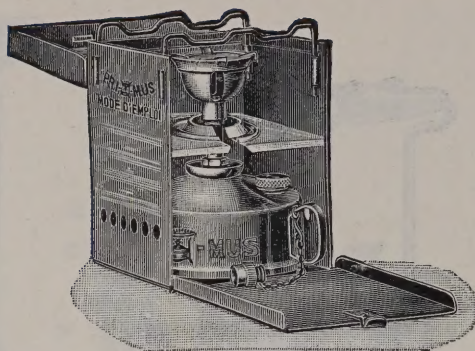
	No. 5.	No. 4.
Capacity of paraffin tank	2½	1½ pints.
One filling will last	4½	4 hours.
Weight with top ring	3	2½ lbs.
Full height	8½	8 inches.
Each	d 15/-	d 13/3
	(including draught shield)	

*SC920 "Primus" Stove, "Roarer" pattern, fitted with stamped steel top ring.

	No. 0.	No. 1.
Capacity of paraffin tank	1½	2½ pints.
One filling will last	3	4½ hours.
Weight with top ring	2½	2¾ lbs.
Full height	8	8½ inches.
Will boil 1 quart of water in less than	4	3½ minutes.
Each	d 12/-	d 13/9
	(including draught shield)	

*SC922 "Primus" Stove, No. 2, "Roarer" pattern as above, but extra large size, being capable of boiling 6 gallons of water in 60 minutes.

Capacity of paraffin tank ...	4¾ pints.
Oil consumption, per hour	1 pint.
Full height	11 inches.
Weight with top ring	5½ lbs.
Each	d 21/6



SC924

*SC924 The New Auto "Primus," No. 71 L. This is a portable stove and is invaluable for outdoor purposes, the tin box being fitted to act as a draught screen and kettle stand; burns petrol only and needs no preheating or pumping.

Weight complete in tin box	....	....	....	1 lb.
With one filling will burn for	....	....	....	1 hour.
Boils 1 pint of water in	....	....	....	5 minutes.
Overall size	....	....	....	$5 \times 3\frac{1}{2} \times 3\frac{3}{4}$ inches.
Price, complete in tin box	....	....	....	d 8/6 each.



SC926

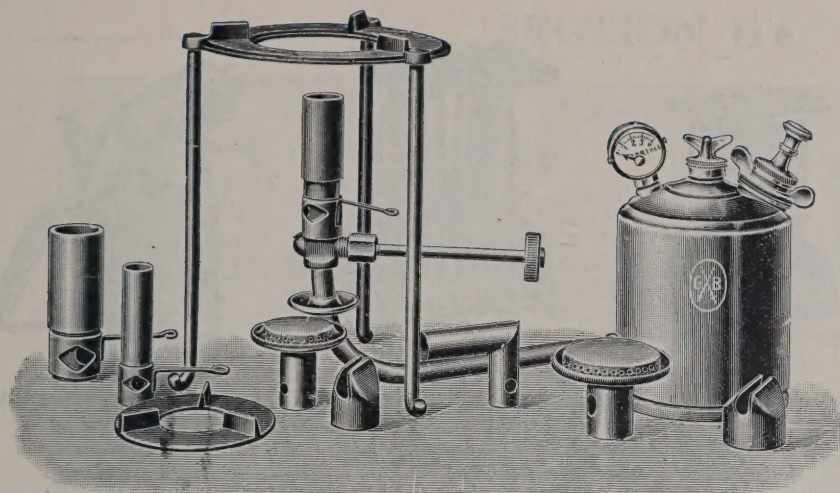
*SC926 "Primus" Portable Outfits, consisting of stove, draught shield, spirit can, spanner and cleaning needles.

	Size of Tank.	Size of Tin Box.	Outfit complete, including Stove.
No. 221 L ("Roarer")	$2\frac{1}{8}$ pints	$8 \times 7 \times 4\frac{1}{2}$ in.	d 18/- each.
No. 100 L ("Roarer")	2 "	$8 \times 7 \times 4\frac{1}{2}$ "	d 17/9 "

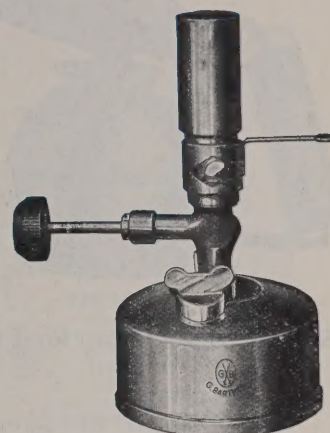
"Primus" Accessories.

- *SC931 Cleaning Needles, for valve neck, per dozen packets (3 per packet) d £0 1 0
- *SC932 Nipple Keys, "Roarer" pattern per doz. d £0 9 0
- *SC934 Nipple Keys, "Silent" pattern ,, d £0 4 6
- *SC936 Tin Boxes of Spare Parts, containing the necessary parts for renewal for "Silent" pattern each d £0 1 9
- Ditto, "Roarer" pattern ,, d £0 1 9
- Each box contains 6 cleaning needles, 2 nipples, 1 nipple key, 3 asbestos packings, 1 pump leather and 3 tank lid washers.
- *SC938 Packets of Spare Parts, packed in stout envelope and containing 9 cleaning needles, 2 tank lid washers, 2 asbestos packings, 2 nipples, 1 pump leather each d £0 0 9

When ordering, please state No. of stove or lamp.



SC940 ($\frac{1}{2}$ actual size)



SC942

This apparatus may be recommended for all heating and annealing in laboratories—its flame gives no smoke or smell and can be raised to maximum power at the start by means of a pressure pump. The gauge on the container permits the pressure to be controlled at will.

The apparatus is made entirely of brass—the container is polished.

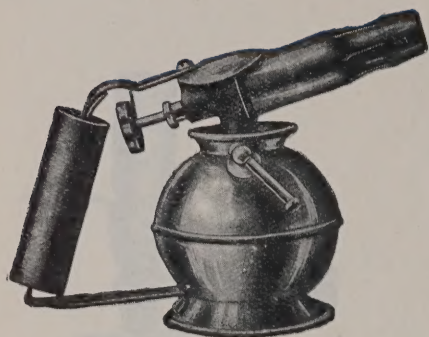
For larger heating surface this apparatus can be supplied with several flames and a larger container. Particulars on application.

***SC940 Benzine or Benzol Burner, "Neukryolith," with pressure pump and manometer, original Barthel.**

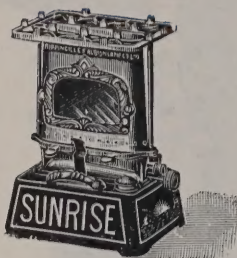
Capacity of container	....	....	about	{ pints	$1\frac{5}{8}$
				{ ltr.	0.9
Weight of apparatus without tripod	....	....	"	{ lbs.	$2\frac{7}{8}$
				{ kg.	1.300
Weight of iron tripod for Bunsen burner	....	....	"	{ lbs.	$1\frac{1}{2}$
				{ kg.	0.720
Weight of iron tripod for cooker	....	....	"	{ lbs.	$1\frac{3}{4}$
				{ kg.	0.630
Capacity with a pressure of 1 atm. within container					
Outlet opening of flame tube	....	....	about	{ inch	$\frac{7}{8}$
				{ mm.	21
One filling of 0.75 ltr. ($1\frac{3}{8}$ pints) burns at full flame	....	....	"	{ hours	4
Consumption of fuel per hour, max.	....	....	"	{ pints	$\frac{1}{3}$
				{ ltr.	0.18
1 ltr. ($1\frac{3}{4}$ pints) of water—of a temp. of 15° C. = 59° F.—boils in	....	....	"	{ min.	5-6
Largest length of flame	....	....	"	{ inch	11
				{ mm.	280
Price of apparatus without tripod	....	....	....		d 50/-
Price of tripod for Bunsen burner tube	{ (a) without ring	....			d 3/3
	{ (b) with ring	....			d 4/3
Price of tripod for burner head for cooking purposes	....	....			d 5/-

The extra parts shown in illustration are not now included in prices. They are furnished on special order only at extra charge.

***SC942 Automatic Burner for Benzine.** Capacity $\frac{2}{3}$ pint. Price, burner only, without tripod d £1 4 0



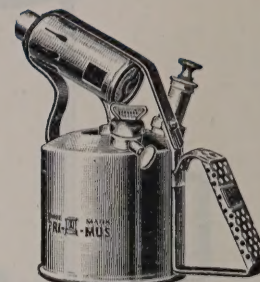
SC944



SC945



SC946



SC948

***SC944 Blow Lamp for Petrol or Benzoline.** The flame is so intense that a $\frac{3}{16}$ in. brass rod can be easily melted.

This lamp will not work with paraffin.

Diameter at end of burner, $\frac{3}{4}$ in. Period of continuous action, 1 hour 40 minutes.

Temperature attained, 2300° F. Capacity, $\frac{2}{3}$ of a pint. Weight, empty, 2 lbs. 2 oz. Each **£1 5 6**

This lamp is a vast improvement on all makes at present on the market. Owing to its strong spherical construction it is unnecessary to have a Safety Valve, which is absolutely essential on cylindrical lamps. The user is well aware of the shortcomings of the Safety Valve and its elimination is an advantage. In addition to the above, there are many other improvements.

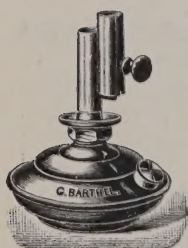
1. THE COMBINATION METAL WICK does away with all chances of the flame blowing back.
2. THE REGULATING BUTTON, being underneath the handle, can be turned with the finger and thumb of the hand holding the lamp, leaving the other hand free.
3. THE HEATING CUP, being of a large capacity, holds sufficient liquid to enable the lamp to start at high pressure with one heating.
4. THE HOOD is so constructed that the flame is diverted entirely round the burner.
5. NO PUMP is necessary.

SC945 Petroleum Lamp, "The Sunrise," with $4\frac{1}{2}$ in. burner, height $10\frac{1}{4}$ in., width $7\frac{1}{2}$ in. **£0 7 6**

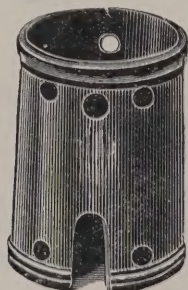
SC946 Petroleum Lamp, "The Sudan," with $2 \times 4\frac{1}{2}$ in. burners, height $11\frac{1}{2}$ in., width $7\frac{5}{8}$ in. **£0 15 0**

***SC948 "Primus" Paraffin Blow Lamps.**

	No. 1 Inclined Burner.	2 Inclined Burner.	3 Vertical Burner.
Capacity	1	$1\frac{3}{4}$	1
Price	 d 13/-	 d 15/-	 d 13/-



SC950



SC960



SC962



SC964



SC966

***SC950 Combined Spirit Lamp and Bunsen Burner** **£0 17 0**

***SC952 Iron Tripod, with ring, for above** **£0 4 0**

SC960 Lamp Screen, stoneware each 3/- ; per doz. **£1 13 0**

***SC962 Lamps, glass, with brass screw wickholders fitted with wick, and glass cap ground to fit.**
Price 2 oz., **b 2/6**; 4 oz., **b 3/2**; 8 oz., **b 4/6** each.

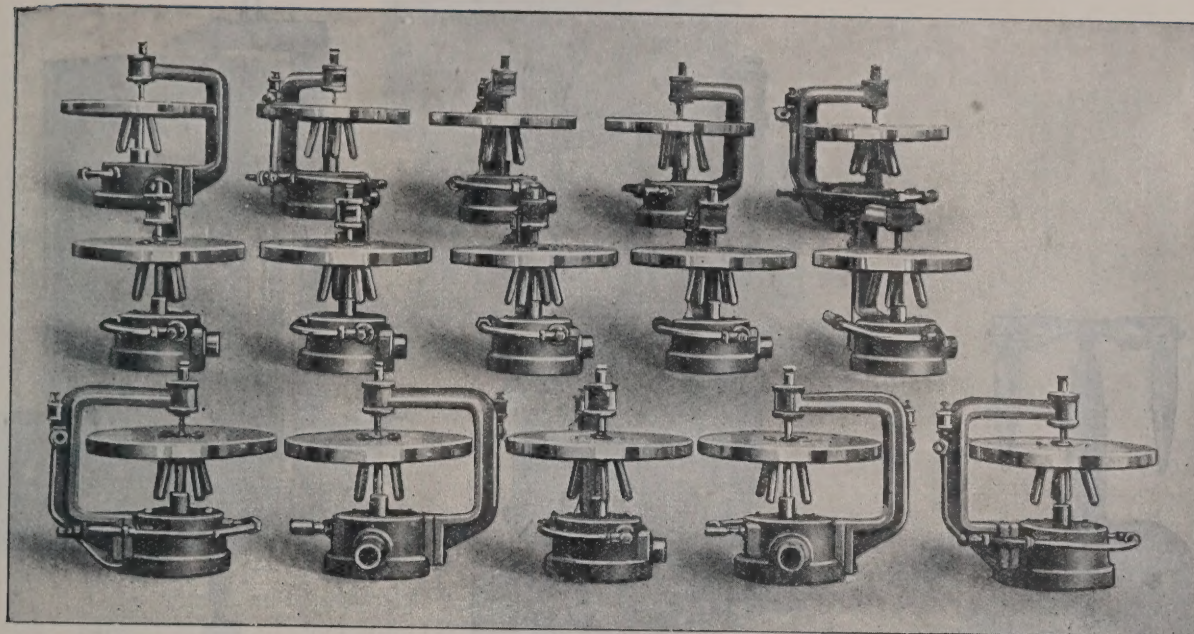
***SC964 Spirit Lamps, glass, with ground cap and porcelain wickholders, fitted with wick.**
Price 1 oz., **b 1/10**; 2 oz., **b 2/3**; 4 oz., **b 2/6**; 8 oz., **b 3/2** each.

***SC966 Spirit Lamps, with side tubulure stoppered, and ground cap.**
Price 4 oz., **b 3/2**; 8 oz., **b 4/1** each.

SC967 Wick for above lamp per yard **£0 0 2**

SC968 Porcelain Wickholders for Nos. SC964 and SC966 per doz. **£0 2 6**

SECTION II e.



A group of B.T.L. Centrifuges after test, and ready for despatch, as supplied to the War Office, Admiralty, Home and Foreign Governments.

Centrifuges.

The centrifuges illustrated and described are made in our works at Walthamstow, and are **accurately balanced**, the greatest care being taken in seeing that the balance of the disc is perfect, and that the buckets are equal in weight, etc., as every user of a centrifuge knows the most perfect balancing is essential to the well running of a perfect centrifuge. Our B.T.L. Centrifuges are in use in all parts of the world, and have given the highest satisfaction on account of their precision in manufacture and the severe tests they are put to before being sent out. Especially is this the case with the larger patterns, some of which have been in constant daily use for over twenty years.

All centrifuges are tested under **full load** for several hours.

Our **large pattern centrifuges** have been in daily use in a large number of laboratories and have given universal satisfaction.

We manufacture centrifuges for all purposes, and for driving by

- (a) Hand.
- (b) Water.
- (c) Electricity.

Holders are made to take (i) Tubes

- (a) Cylindrical.
- (b) Conical.
- (c) Sedimentation.

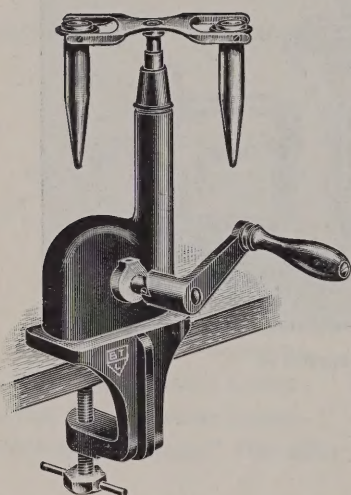
(ii) Bottles.

The standard types manufactured are :

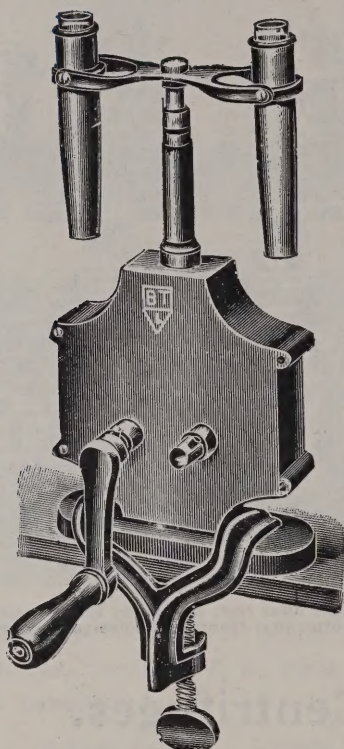
- I. **High-Speed Medical Centrifuges** for sedimenting milk, blood, urine, sputum, etc.
- II. **Martin Centrifuges** for separating blood corpuscles, cultures, etc.
- III. **High-Speed Electric Centrifuges** for water examination and the same purpose as I and II, and especially for production of vaccines on a large scale.

NOTE.—Our Technical Department is at the service of our clients for advice and information on any subject and instruction in the use and working of different apparatus. Information will be gladly and freely given to the utmost of our ability.

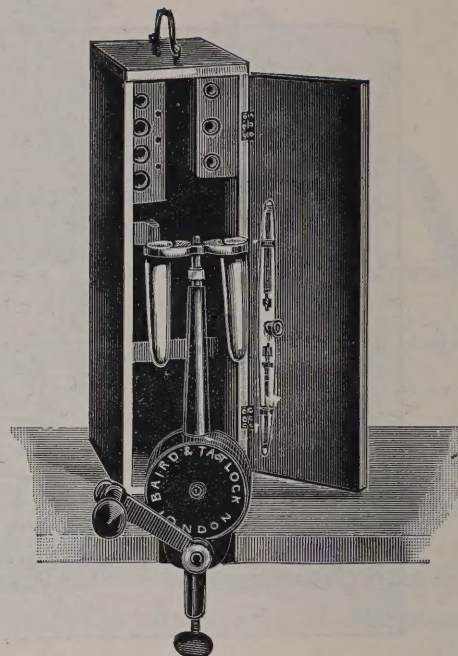
HAND CENTRIFUGES.



SC980



SC988



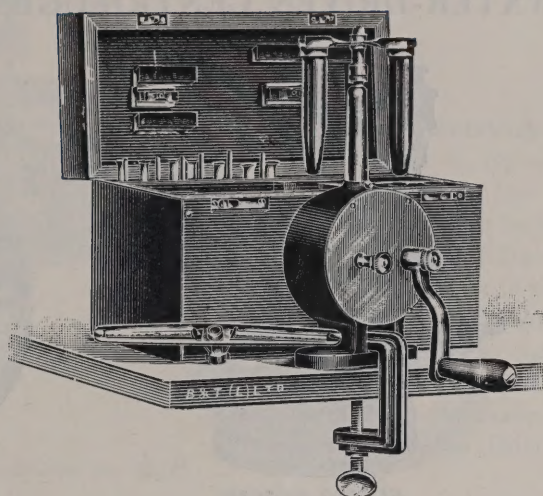
SC994



Haematocrite Frame
As in No. SC994

- SC980** New B.T.L. Hand Centrifuge, for speeds up to 2000 r.p.m. Solid metal casing with cellulose spray finish ; gearing consists of a well cut wheel working on a mild steel worm ; spun aluminium buckets to take 10 ml. tubes. Complete with two plain conical tubes d £1 7 6
- SC982** New B.T.L. Hand Centrifuge as above, but with four buckets d £1 17 6
- SC987** Haematocrite Carrier for above, with which speeds can be obtained up to 3500 r.p.m. each c £0 6 0
- SC988** Centrifuge, geared for two speeds, with two buckets and haematocrite, for separation of blood, urine, etc., with clamp for fixing to table, with two graduated tubes for urine, and two capillary blood tubes a £4 10 0
- SC994** High-Speed Medical Centrifuge, with haematocrite, one pair blood tubes, D, one pair urine tubes, B, one pair plain tubes, C, one pair graduated milk tubes, A (for human milk), one pair sputum tubes, two pairs plain cylinder tubes, with holder and aluminium carriers, fitted in polished mahogany case. This machine with haematocrite attachment is capable of being driven at a speed of 5000 revolutions per minute ; with the aluminium buckets and urine tubes filled a speed of 2500 revolutions per minute can be maintained. Each d £5 5 0

For Centrifuge Tubes see page 179.



SC996

SC996 High-Speed Medical Centrifuge, geared for two speeds, with one pair graduated blood tubes, D, one pair urine tubes, B, one pair plain tubes, C, one pair graduated milk tubes, A (for human milk), one pair sputum tubes, two pairs plain cylinder tubes, with holder, haematocrite and aluminium carriers, in polished mahogany case each £6 6 0

For Tubes, see page 179.

INSTRUCTIONS FOR USING CENTRIFUGES (Nos. SC994-SC996).

These instruments have been devised for the rapid separation of urine, blood, pus, milk, etc. They run easily, and a speed of 2500 revolutions per minute can easily be obtained. The tube holders and haematocrite attachment are made of aluminium to ensure lightness.

BLOOD EXAMINATION.—The finger of the patient, after being cleansed, is punctured with a needle, the first drop of blood is rejected, and the second obtained by a slight pressure. This sample is drawn by suction into the capillary blood tubes; these are placed in the haematocrite frame, and the handle attached to the high-speed spindle, when the tubes can be rotated at a speed of 5000 revolutions per minute.

This process is simple and rapid—the blood does not have time to coagulate, and by centrifugal force the red corpuscles are thrown to the end of the tube, and will occupy about half the tube, or to mark 50. The white corpuscles being next in specific gravity, will occupy a position between the red corpuscles and liquor sanguinis, which is found in the proximal end of the tube, quite clean and free from corpuscles.

URINE EXAMINATION.—Specially graduated percentage tubes are supplied, tapering to one end, and these are revolved about 2500 times per minute. This speed is quite enough to precipitate even the hyaline casts without breaking them or altering their form.

SPUTUM EXAMINATION.—A small quantity of sputum is stirred in a porcelain dish until it is apparently homogeneous; two small tubes are then filled, placed in haematocrite frame, and revolved for three minutes at a speed of 5000 revolutions per minute. The solid portion can then be transferred to slides for microscopical examination.

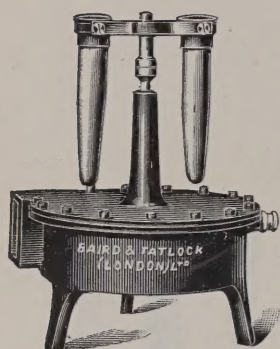
In WORKING WITH SMALL QUANTITIES, where the micro-organisms are few, two large sediment tubes are used, and after the sediment has been precipitated, the greater part of the liquid is decanted, and the remainder transferred to small tubes for final examination at high speed in the haematocrite frame.

MILK EXAMINATION.—

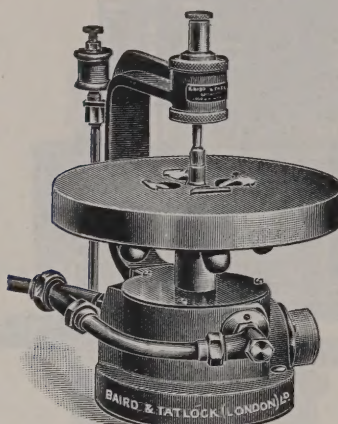
SOLUTION A.		REAGENTS.	SOLUTION B.
Hydrochloric Acid, s.g. 1.16	... 1 part by volume	| Sulphuric Acid, s.g. 1.83	
Amyl Alcohol (special for milk testing)	... 1 part by volume		

Pipette 5 ml. of milk into each tube, add 1 ml. of Solution A, and shake well. Then add Solution B slowly and with repeated shaking until the liquid rises about $\frac{1}{4}$ in. above the zero mark. The tubes are now placed in the buckets and whirled for about one or two minutes, after which the fat rises to the top of the graduation, and can be read off in direct percentages. If the milk is richer than 5 per cent., add an equal quantity of water, mix thoroughly, and multiply the result by two.

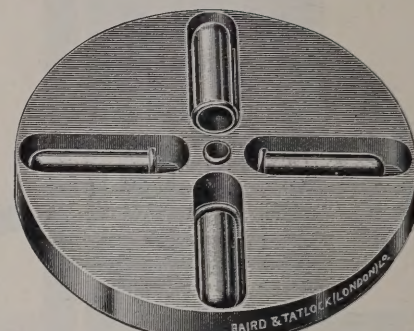
WATER-DRIVEN CENTRIFUGES.



SC1000



SC1002-SC1010

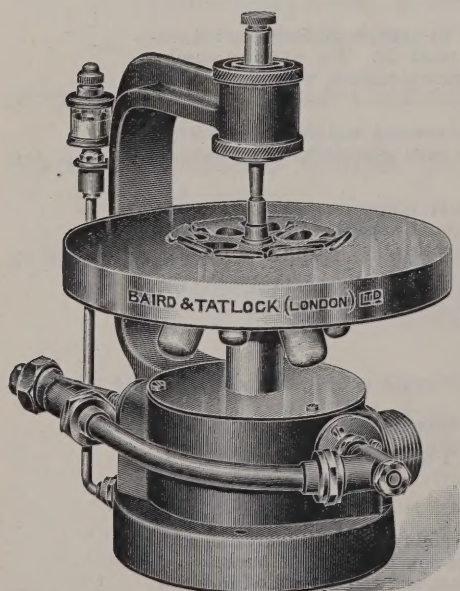


Plan of plate.

SC1000 Centrifuge, with two buckets, arranged to be driven by high water pressure, for the separation of urine, milk, etc., with four plain tapered tubes d £2 10 0

Martin's Water-driven Centrifuge, designed by Dr. C. J. Martin, Director of the Lister Institute of Preventive Medicine, Chelsea, with double jet for low pressures, with accurately balanced aluminium plate, gun-metal Pelton wheel, accurately cut to throw out the water and give the maximum speed at each water pressure. All machines are supplied with twin jets.

SC1002	Martin's Centrifuge, with	5 ml. plate,	4 tube holders	and 4 glass tubes	....	each	d £12 7 6
SC1004	Martin's Centrifuge, „	10 „	4 „	„ „ 4 „	....	„	d £12 7 6
SC1006	Martin's Centrifuge, „	15 „	4 „	„ „ 4 „	....	„	d £13 0 0
SC1008	Martin's Centrifuge, „	20 „	4 „	„ „ 4 „	....	„	d £13 10 0
SC1010	Martin's Centrifuge, „	25 „	4 „	„ „ 4 „	....	„	d £14 0 0



SC1014-SC1018

SC1014 Martin's Centrifuge, with 5 ml. plate, to take 4 x 5 ml. and 4 x 2 ml. tubes, complete with 8 glass tubes d £13 17 6

SC1016 Martin's Centrifuge, with 10 ml. plate, to take 4 x 10 ml. and 4 x 2 ml. tubes, complete with 8 glass tubes d £13 17 6

SC1017 Martin's Centrifuge, with 20 ml. plate, to take 4 tube holders 20 ml., and 4 tube holders 5 ml., complete with 8 glass tubes.... d £14 10 0

SC1018 Martin's Centrifuge, with 25 ml. plate, to take 4 x 25 ml. and 4 x 2 ml. tubes, complete with 8 glass tubes d £15 10 0

Interchangeable plates can be supplied of different sizes.

Extra glass tubes for use with above, see page 179.



Registered No. 66335.

SC1028

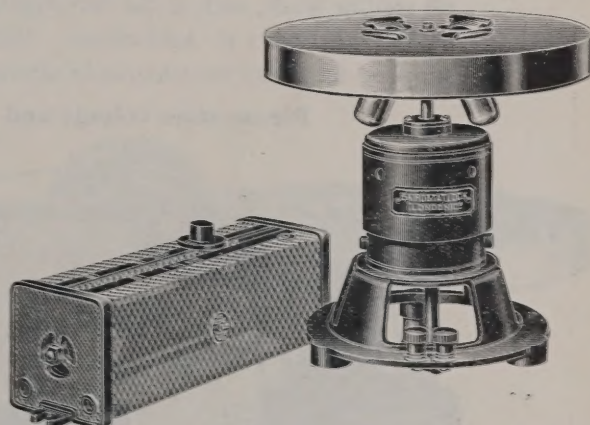
Martin's Centrifuge, arranged for water power to be driven by hand pump as illustrated. The method shown has been found to be by far the most practical in operations when water power is unavailable or of not sufficient strength. The speed reached by means of a few strokes of the pump is equal to that obtained by either electricity or water power. As made by us for use in the field by the British Army during the War.

For prices of **Centrifuges** described above see SC1002-SC1010.

SC1028 Pump, and connection only, suitable for above d £3 3 0

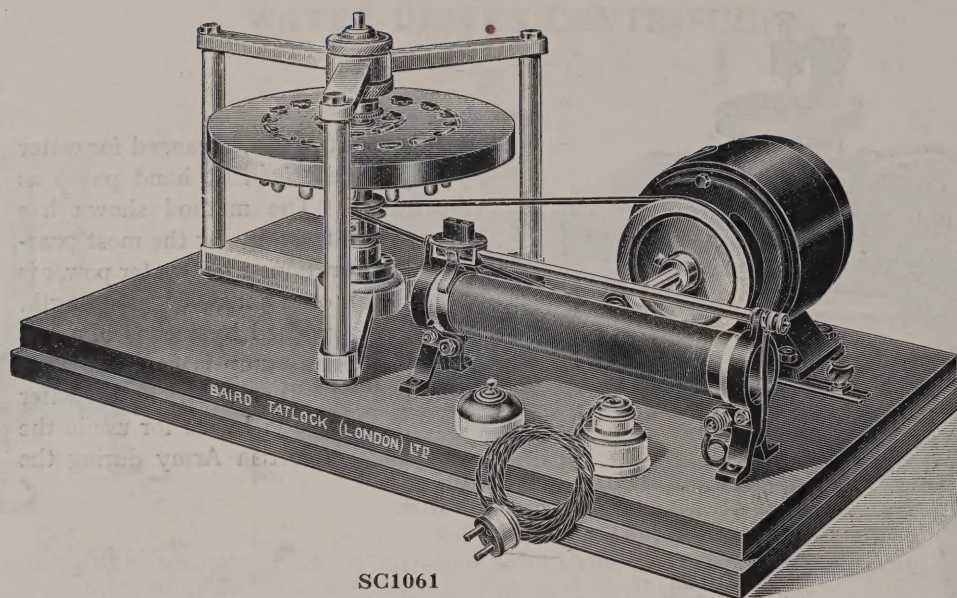
ELECTRIC CENTRIFUGES.

Centrifuges, Martin's Electric, mounted on a vertical motor, complete with speed and voltage regulators, for any voltage, alternating or direct current from 100 to 250 volts. Base of mounting fitted with shock absorbing rubber feet, which effectually prevent any vibration being transmitted to the bench and at the same time hold the centrifuge securely to any flat surface. For speeds up to 3000 r.p.m., complete with flexible lead.



SC1034-SC1042

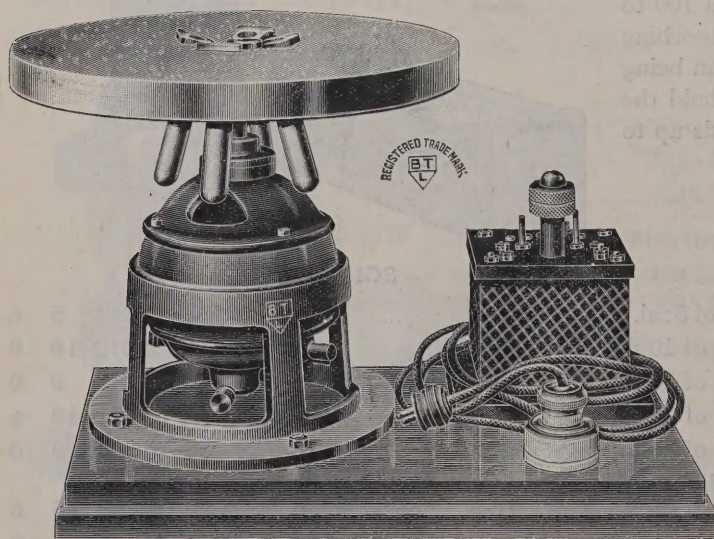
SC1034	Centrifuge, as described, with 4 buckets of 5 ml.	....	....	....	d £11 5 6
SC1036	" " with 4 buckets of 10 ml.	....	....	....	d £12 10 0
SC1038	" " with 4 buckets of 15 ml.	....	....	....	d £13 0 0
SC1040	" " with 4 buckets of 20 ml.	....	....	....	d £13 10 6
SC1042	" " with 4 buckets of 25 ml.	....	....	....	d £15 0 0
SC1044	Centrifuge, as described, to carry 4 buckets with tubes of 5 ml. each, and 4 with tubes of 2 ml.	....	....	....	d £12 15 6
SC1048	Centrifuge to carry 4 buckets with tubes of 10 ml. each, and 4 with tubes of 2 ml.	....	....	....	d £14 0 0
SC1050	Centrifuge, as described, to carry 4 buckets with tubes of 15 ml. each, and 4 with tubes of 2 ml.	....	....	....	d £14 10 0
SC1052	Ditto, to carry 4 buckets with tubes of 20 ml. each, and 4 with tubes of 2 ml.	....	....	....	d £15 1 0
SC1054	Ditto, to carry 4 buckets with tubes of 25 ml. each, and 4 with tubes of 2 ml.	....	....	....	d £16 10 0
Free Wheel Device for any of the above, extra, d £1 17 6.					



SC1061

SC1061 Martin's Centrifuge, mounted on board, fitted with soft rubber feet which prevent vibration being transmitted to the bench, complete with motor and regulating rheostat and free wheel attachment; fitted with 24 buckets for 2 ml. tubes, specially designed for routine work, such as the investigation of **foot-and-mouth disease**. As made by us for the Board of Agriculture. With 24 glass tubes complete, as figured can be supplied for either continuous or alternating current Price *d* £33 10 0

Please state voltage and nature of current when ordering.



SC1062-SC1066

Centrifuge, High-Speed Electric. Speed 8000 r.p.m. In this pattern a special vertical motor with a strong spindle is employed. The spindle is fitted with a Martin's centrifugal plate adapted to carry four buckets of either 5, 10, 15, 20, or 25 ml. capacity. Complete, mounted on vibration proof wooden sole, with plug switch and starter resistance.

SC1062 Price with 4-5 ml. buckets *d* £19 0 0

SC1063 Price with 4-10 ml. buckets *d* £19 17 6

SC1064 Price with 4-15 ml. buckets *d* £20 5 0

SC1065 Price with 4-20 ml. buckets *d* £20 10 0

SC1066 Price with 4-25 ml. buckets *d* £22 0 0

Please state voltage, phase and periodicity of current when ordering.

This centrifuge is suitable for continuous and alternating current.

For Tubes see page 179.

SC1067 **Centrifuge** on universal vertical motor, suitable for A.C. or D.C., 3000 r.p.m., fitted to screw to bench top, to carry 4 tapered tubes, 15 ml. capacity, in spun copper bowl with clip-on cover. Complete with speed regulator d £12 5 0

SC1068 **Glycerine Speed Indicator** for above d £0 15 0

SC1069 Fitted on vibration proof wood base, extra d £1 10 0

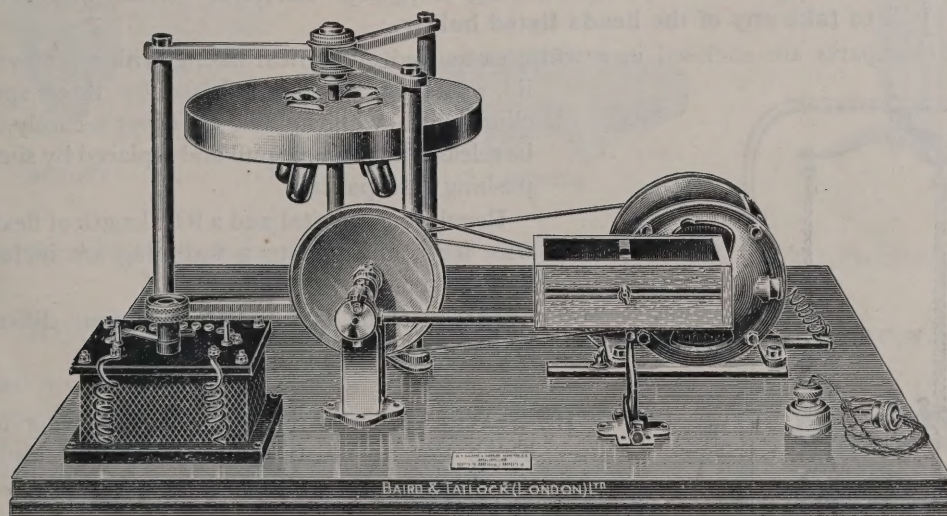
SC1070 **Centrifuge** on vertical motor, similar to above but fitted with rubber feet for standing on bench top, 3000 r.p.m., to take 4 cylindrical-shaped buckets, 25 ml. capacity, with adapters for 15 ml. tubes d £14 5 0

SC1071 **Glycerine Speed Counter** for above d £0 15 0

Balance, Counterpoising, suitable for counterpoising centrifuge tubes, see Balance Section.



SC1067-SC1068



SC1072

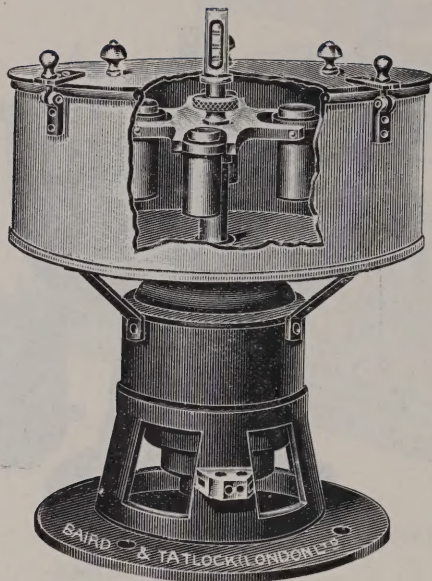
SC1072 **Martin's Centrifuge**, adapted to carry 4 tubes of 25 ml., mounted on board and arranged for driving by electricity. Complete with motor, starter and shaking apparatus for bottles, test-tubes, ampoules, etc. Size of box, 9 x 5 x 4 ins. deep. Can be supplied for continuous or alternating current d £44 0 0

Other sizes made to order.

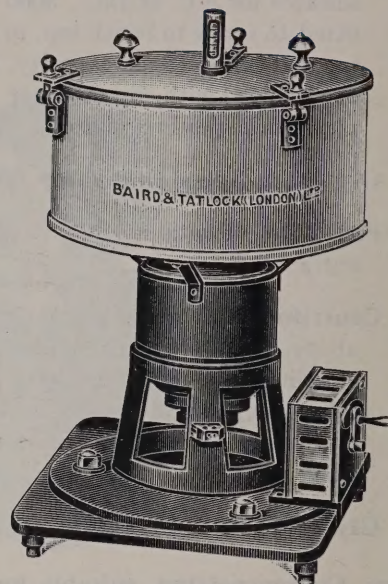
Please state voltage and nature of current when ordering.

SC1073 **Martin's Centrifuge**, adapted to carry 4 tubes of 25 ml. and 4 of 2 ml., complete on board with motor and rheostat, together with Westminster Vaccine Shaker (see Section II N, SC3008), arranged for continuous current d £45 0 0

UNIVERSAL CENTRIFUGE.



SC1074



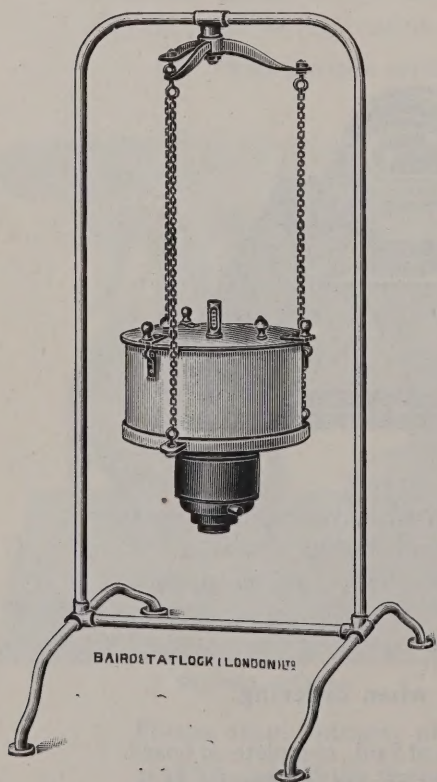
SC1075

B.T.L. Universal Centrifuge, 3000 r.p.m., consisting of $\frac{1}{10}$ h.p. Universal vertical motor with a spindle fitted to take any of the heads listed below.

All rotating parts are enclosed in a white enamelled cylindrical casing with a removable lid. The lid is held in place by three spring clips, which, while holding the cover securely, can be released by a single pull and replaced by simply pushing into position.

Regulating rheostat and a 9 ft. length of flexible wire for connection to a wall-plug are included with all models.

The machine is supplied with four different types of mounting :—



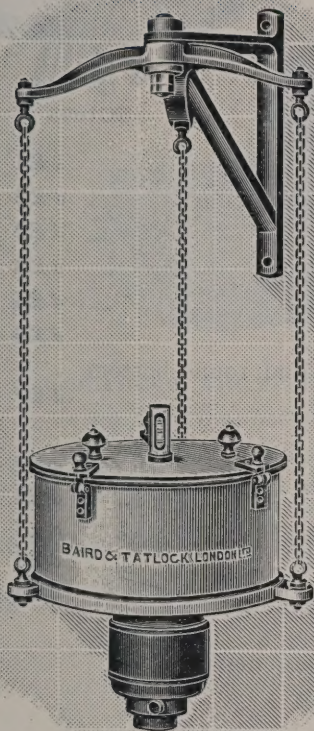
SC1076

SC1074 With a Sorbo lined base for screwing to a bench top, as illustrated, but without head or speed indicator d £15 15 0

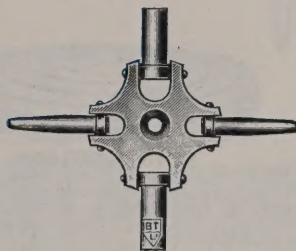
SC1075 Mounted on an iron stand fitted with ball castors, so that it can easily be moved from room to room. In this mounting a Sorbo pad is interposed between the machine and the stand, and rubber sockets are provided, to be placed under the castors when the machine is in use, as illustrated, but without speed indicator d £21 0 0

SC1076 Suspended by three chains from a white enamelled tubular iron stand, as illustrated, but without speed indicator d £21 0 0

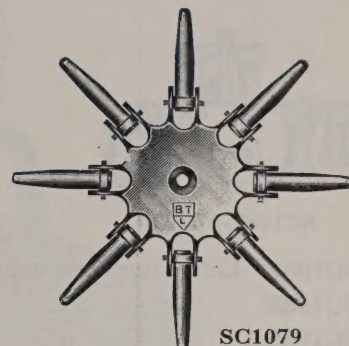
Please state voltage when ordering.



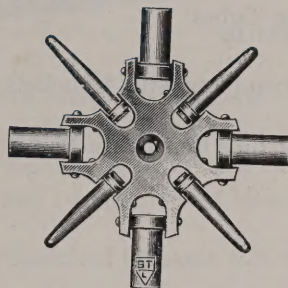
SC1077



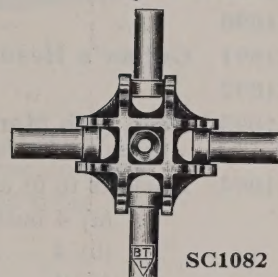
SC1078



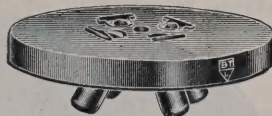
SC1079



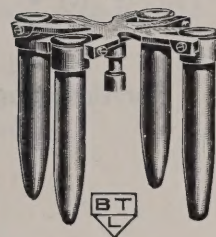
SC1081



SC1082



SC1084

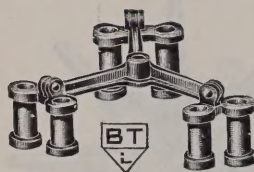


SC1086

SC1077 Suspended by three chains from a cast-iron white enamelled wall bracket, as illustrated d £20 0 0

HEADS SC1078-SC1093 TO FIT B.T.L. UNIVERSAL CENTRIFUGE.

SC1078	Head to fit centrifuges SC1074-SC1077, complete with 2 conical buckets 15 ml. capacity and 2 cylindrical buckets 25 ml. capacity, as illustrated	d £1 17 6
SC1079	Head with 8 conical buckets 15 ml. capacity, as illustrated	d £2 17 6
SC1080	Head with 4 cylindrical buckets 15 ml. capacity	d £2 5 0
SC1081	Head with 4 cylindrical and 4 conical buckets 15 ml. capacity, as illustrated	d £3 7 6
SC1082	Head with 4 cylindrical buckets 50 ml. capacity, as illustrated	d £4 0 0
SC1083	Glycerine Speed Counter for use with heads SC1078-SC1082	d £0 15 0
SC1084	Martin's Plate Heads to fit B.T.L. Universal Centrifuge and to carry a set of 4 buckets of 5, 10, 15, 20, or 25 ml., as desired (buckets extra)	d £3 3 0
SC1085	Head, complete with 2 buckets for 15 ml. conical tubes	d £0 18 0
SC1086	Head, complete with 4 buckets for 15 ml. conical tubes	d £1 10 0



SC1087-SC1090



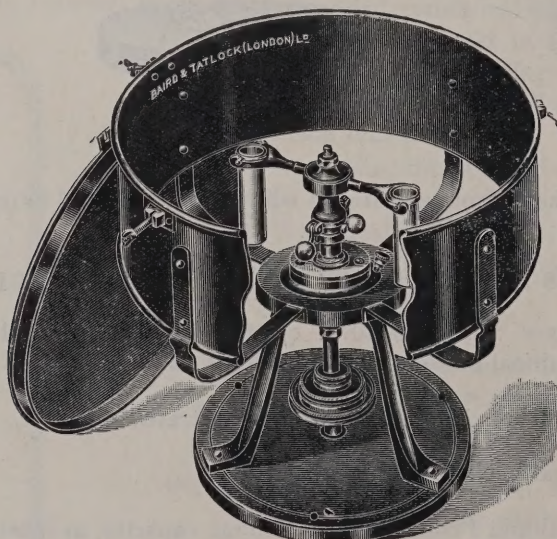
SC1091-SC1092



SC1093

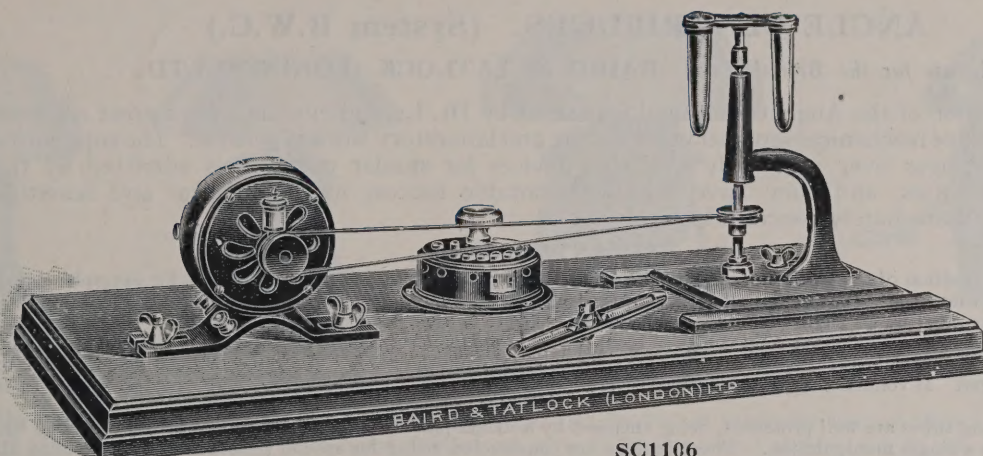
SC1087	Leffmann Beam Head with 2 buckets	....	....	....	....	....	d £1 16 0
SC1088	„ „ „ „ 4 „	....	....	....	....	....	d £2 0 0
SC1089	„ „ „ „ 6 „	....	....	....	....	....	d £2 12 6
SC1090	„ „ „ „ 8 „	....	....	....	....	....	d £3 0 0
SC1091	Gerber's Head for 4 Gerber Tubes	....	....	....	....	....	d £4 2 6
SC1092	„ „ „ 8 „ „	....	....	....	....	....	d £4 10 0
SC1093	Head with Martin's Plate, complete with 4 buckets, suitable for 15 ml. round bottom or tapered tubes	....	....	....	....	....	d £7 0 0
SC1094	Buckets to fit all types of Martin's Centrifuge Plates.						
	(a) 4 buckets, 25 ml.	....	....	....	....	per set	d £2 5 0
	(b) 4 „ 20 „	....	....	....	....	„	d £1 13 6
	(c) 4 „ 15 „	....	....	....	....	„	d £1 10 0
	(d) 4 „ 10 „	....	....	....	....	„	d £1 7 6
	(e) 4 „ 5 „	....	....	....	....	„	d £1 5 0

For Centrifuge Tubes, see Page 179.



SC1100

- | | | | | | |
|--------|--|---------|-----|----|---|
| SC1100 | Centrifuge, Westminster Model, designed by Mr. F. R. Chopping. The centrifuge is mounted on a heavy iron tripod base and the vertical shaft runs on ball bearings . The horizontal arm carrying the tube holder is also provided with ball bearings and, owing to the action of a centrifugal governor, has a free wheel action in both directions , thus ensuring a gradual starting and stopping movement . Machine is strongly made, is quiet and smooth in action , and can be run at a speed up to 3000 revolutions per minute. Price, without motor, for four tubes , each 15 ml. capacity.... | d | £22 | 10 | 0 |
| SC1102 | Centrifuge, exactly as above, but with arm carrying buckets for four tubes , each 20 ml. capacity | d | £25 | 0 | 0 |
| SC1104 | Electric Motor and Starter, suitable for above | extra d | £14 | 5 | 0 |



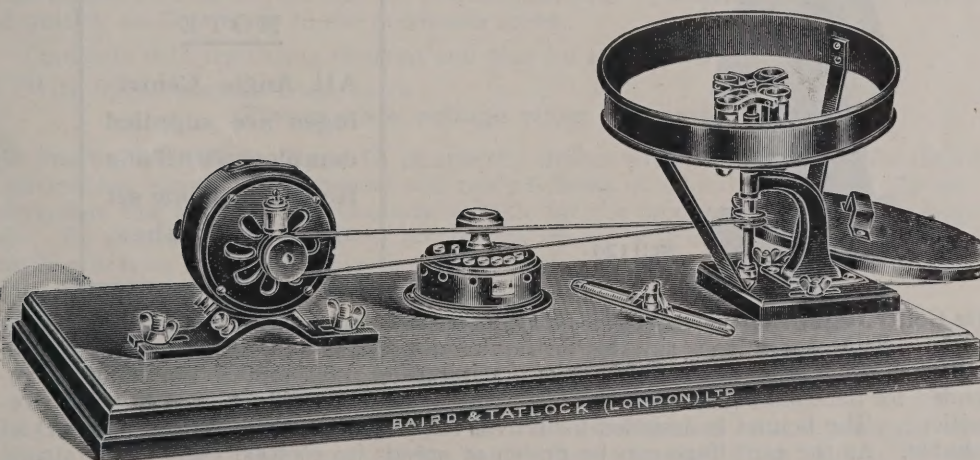
SC1106

Centrifuge, with aluminium buckets to carry tapered glass tubes, holding about 15 ml. each, for urine analysis, etc., and haematocrite arrangement for blood analysis; mounted on wood base, with adjustment for tightening belt, with two tapered plain tubes, two tapered graduated tubes for urine, and two graduated blood tubes.

SC1106 Price, with electric motor and starter mounted on same sole with two buckets each d £15 0 0

SC1108 Price, with electric motor and starter mounted on same sole with four buckets „ d £16 0 0

When ordering please give voltage of electric supply, and state if continuous or alternating current.



SC1112

SC1110 Centrifuge, similar to No. SC1106, arranged with two buckets, but fitted with guard each d £16 0 0

SC1112 Centrifuge, as above, arranged with four buckets, but fitted with guard „ d £17 0 0

When ordering please give voltage of electric supply, and state if continuous or alternating current.

ANGLE CENTRIFUGES. (System B.W.C.)

Agents for the British Isles—BAIRD & TATLOCK (LONDON) LTD.

The invention of the Angle Centrifugal Separator by Dr. Lundgren stands for a great advance in the technique of mechanical separation for testing and laboratory work in general. The superiority of these centrifuges over previously available devices for similar purposes is admitted by the foremost authorities, and they have met with notable success in the medical and scientific quarters most immediately concerned.

ADVANTAGES.

The angular position of the glass tubes greatly increases the rapidity of the separation, so that, for example, a test sample which in the earlier types of centrifuges requires from 40 to 50 minutes for separation, is ready in from 4 to 6 minutes when separated by an angle centrifuge. The saving of time is thus very considerable.

The separated mass of solids, or semi-solids, is compressed to a firmer consistency by the angle centrifuge than by earlier types of centrifuges, and is consequently almost entirely freed from the fluid. The fluid portion above the mass of solids is thus larger. If volumetric pipettes are used the cellular volume of the blood can be determined in from 5 to 15 minutes.

The separating tubes are well protected, being enclosed by a nickel-plated casing which can be placed direct on the motor shaft with a single manipulation. These casings are constructed either for special purposes or for collecting all kinds of particles, with spaces for from 4 to 27 tubes.

The nickel-plated bowl presents very slight resistance to the air, the consumption of power by the motor being in consequence hardly more than 40 watts, or the amount of current consumed by a 16-candle-power lamp.

The angle centrifuges are not bolted to the base plate, but can be moved about as desired. In spite of this advantage they are, contrary to what is the case regarding ordinary centrifuges, absolutely risk-free in operation. The bowl can be easily stopped by means of the hand. They are easy to operate and require hardly any attention.

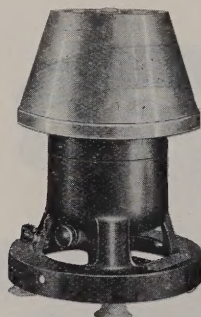
ALL MOTOR CENTRIFUGES are provided with *Universal Motors* for both D.C. and A.C. current, of all usual voltages and frequencies.

The centrifuges are provided with 4 carefully dimensioned rubber feet, which dynamically align the centrifuge during the running. The slight vibrations are not transmitted to the base plate, and the running of the centrifuges is in consequence almost inaudible.

Bonnets of all types can be purchased separately, and with the aid of a special reductor, or in some cases by simple regulation of the resistance, they can be used on a single motor. For instance:—

L type bonnet can be used on a G machine motor.
B " " " " " L " " "

and so on. Full particulars of the possible combinations of motor and various bonnets, and pamphlet containing graphs of sedimentation curves obtained under varying conditions, together with other valuable information, will be sent on request.



SC1120

NOTE

All Angle Centrifuges are supplied complete with Tube Holders and one set of Glass Tubes.

- *SC1120 Angle Centrifuge, Type A**, with electric motor suitable for use on direct and alternating current. This centrifuge is suitable for liquids difficult of sedimentation—*e.g.*, blood, emulsions of bacteria, thick albuminous precipitations, etc.—and is especially recommended for determining the cell volume. The angle of centrifugalization is 20° (Apposition). The bonnet is designed for 6 oval tubes and the tube holders are not detachable. As the centrifuge can be driven at speeds up to 4000 r.p.m., only strong tubes should be used. The remarkably high efficiency renders this centrifuge unsuitable for light particle suspensions, and it should therefore not be used for urine and similar fluids.

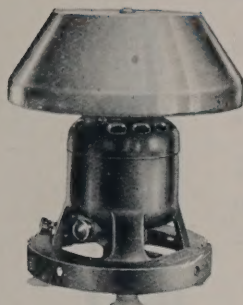
Complete with regulating rheostat and plug for connection.	Price	....	....	d £15 10 0
With Speed Counter fitted, extra	....	....	....	d £2 17 6

(Please state voltage when ordering.)

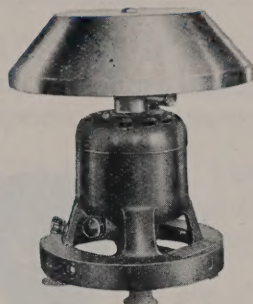
- *SC1122 Angle Centrifuge, Type A**, as above, but with bonnet designed to take 10 round tubes.

Price	....	....	....	....	....	....	....	d £15 10 0
With Speed Counter fitted, extra	....	....	....	....	....	....	....	d £2 17 6

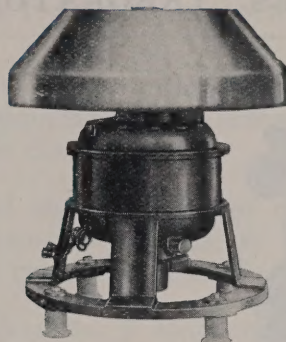
(Please state voltage when ordering.)



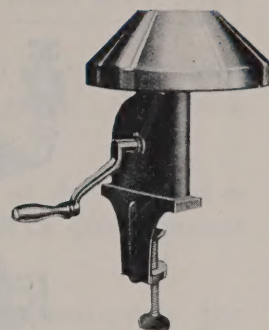
SC1124



SC1126



SC1128



SC1130

***SC1124 Angle Centrifuge, Universal, Type L**, with electric motor suitable for use on direct and alternating current. The bonnet is of an especially light and strong design, the cover being of nickel-plated phosphor-bronze. Twelve tubes can be inserted simultaneously, 8 having an angle of inclination of 28° and 4 an angle of 48° . The angles have been selected in view of the widest possible sphere of use for the machine, enabling it to be used for all kinds of fluids. Both round tubes and our flat high efficiency tubes fit the detachable tube holders. When centrifugalizing urine or similar liquids the tubes should be placed at an angle of inclination of 48° .

Complete with regulating rheostat and plug for connection d £16 15 0

With Speed Counter fitted, extra d £2 17 6

(Please state voltage when ordering.)

***SC1126 Angle Centrifuge, Type M**, specially devised for Wassermann tests, with electric motor suitable for use on direct or alternating current. The centrifugal bonnet is light and strong and the casing of nickel-plated phosphor bronze. The pressed aluminium plates are adapted for round tubes, 27 of which can be inserted simultaneously. All tubes have an angle of inclination of 40° ; the centrifuge is therefore universal, and can be used for all liquids that are not too difficult of sedimentation. The machine is easily started and quickly accelerates up to the maximum speed.

Complete with regulating rheostat and plug for connection d £22 0 0

With Speed Counter fitted, extra d £2 17 6

(Please state voltage when ordering.)

***SC1128 Angle Power Centrifuge, Type G**, electrically driven with motor suitable for direct or alternating current. The bonnet will carry 6 flasks of a total capacity of 875 ml., and renders this centrifuge particularly suitable for the production of sera on a large scale. By reason of the size of the bonnet the efficiency is very high. The angle of centrifugalization is 40° , enabling the sedimentation of all kinds of liquids. All flask holders are detachable. The bonnet is provided with a detachable cover.

Complete with regulating rheostat and plug for connection d £60 0 0

With Speed Counter fitted, extra d £2 17 6

(Please state voltage when ordering.)

***SC1130 Angle Centrifuge, Hand Driven, Type B**, with nickel-plated bonnet arranged for 4-15 ml. tubes, either round, oval, or flat, which can be inserted at an angle of 25° for the separation of blood or other liquids difficult of separation, or at an angle of 45° for treating urine and similar fluids which are easily separated. (See diagram on page 180.) The pressed aluminium tube holders are detachable and the centrifuge can easily be worked up to a speed of 3000 r.p.m. ($1\frac{1}{2}$ revolution per second of the handle = 2800 r.p.m. of the crank shaft.) Price d £4 5 0

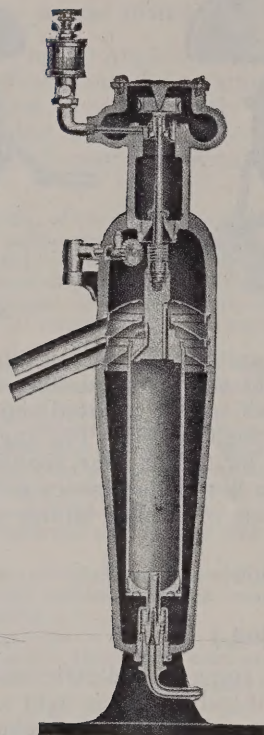
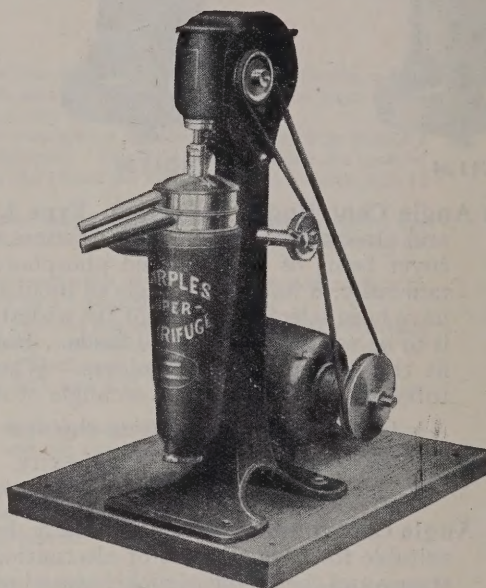
***SC1132 Angle Centrifuge, Type BE-EM**, as described under SC1130 but electrically driven, with motor suitable for direct or alternating current. Speed 3000 r.p.m.

Complete with regulating rheostat and connecting plug d £7 15 0

(Please state voltage when ordering.)

For Tubes and Accessories see pages 180 and 181.

"SHARPLES" LABORATORY SUPER-CENTRIFUGE.

SECTIONAL CUT
LABORATORY SUPER-CENTRIFUGE—TURBINE DRIVEN

LABORATORY SUPER-CENTRIFUGE—ELECTRIC MOTOR DRIVEN

THE SHARPLES SUPER-CENTRIFUGE is an apparatus designed so as to permit of a centrifugal force approximating **40,000 times the force of gravity** being applied to liquids, either for the purpose of removing finely divided suspensions or for the separation of two immiscible liquids forming an emulsion.

This machine differs from the tube or bottle Centrifuge in that the liquid may be continuously fed in at the bottom of the bowl and discharged through the spouts at the top of the bowl.

THE SUPER-CENTRIFUGE can be supplied for either of four different types of drive, i.e., by **steam, compressed air, hand** or **electric motor**, and can also be furnished with one of three types of bowls as follows :

CLARIFIER BOWL : This has but one outlet at the top and is used for the removal of suspended solids from a liquid. The solids are retained in the bowl and are extracted at the end of a run when the bowl is stopped.



CLARIFIER BOWL

THE SHARPLES LABORATORY SUPER-CENTRIFUGE



SEPARATOR
BOWL

SEPARATOR BOWL : This has two outlets and is used for the separation of emulsions of two immiscible liquids into their component parts. Any solids in suspension are removed as in clarification.

BATCH BOWL : This bowl has no discharge outlets at the top and is arranged for handling small amounts of liquid in a batch or discontinuous matter and for collecting small quantities of solid.

These bowls are 2" in diameter, 9" long and hold approximately 300 millilitres of liquid.

Applications of the Sharples Super-Centrifuge

PATHOLOGICAL WORK. Clarification of agars, broths and albumens ; sedimentation of bacteria ; preparation of serums, etc. etc.

DEHYDRATION OF LIQUIDS. Essential oils ; Mineral oils ; Vegetable oils ; Fats, etc. etc.

CLARIFICATION OF LIQUIDS. Colloidal suspensions, pharmaceutical extracts, Varnishes, etc. etc.

*SC1136

SHARPLES SUPER-CENTRIFUGAL LABORATORY MODEL ARRANGED FOR STEAM or COMPRESSED AIR DRIVE, fitted with Turbine, for continuous operation with a maximum speed of 40,000 r.p.m., requiring a steam or compressed air pressure of 25 lbs. per square inch and consuming 50-100 lbs. of steam per hour, or 16 cubic feet of air per minute. Height 24", size of base 10" x 8"; packed weight 75 lbs.

Specify Steam or Compressed Air and Type of Bowl Desired.

f£60

*SC1137

SHARPLES SUPER-CENTRIFUGAL LABORATORY MODEL ELECTRIC MOTOR DRIVE complete, giving approximate speed of 36,000 r.p.m. The machine and $\frac{1}{4}$ h.p. motor are mounted on a wooden base; the unit is ready for operation when connected to the supply of electric current. Motors for normal voltages, 50 or 60 cycle A.C., or usual D.C. voltages are standard equipment. Height 24"; size of base 21" x 14"; packed weight 100 lbs.

Specify Current, Voltage, Cycles, Phase and Type of Bowl Desired.

f£70

*SC1138

SHARPLES SUPER-CENTRIFUGAL LABORATORY MODEL, HAND DRIVE TYPE; can be operated at an approximate speed of 25,000/35,000 r.p.m. Height 24"; size of base 10" x 8"; packed weight 75 lbs.

Specify Hand Drive and Type of Bowl Required.

f£60

All the above are complete.

STEEL, HEAVILY TINNED :

SPARE BOWLS ONLY.	*SC1139	Clarifier	...	...	...	...	f£7	10	0
	*SC1140	Separator	...	...	...	...	f£7	10	0
	*SC1141	Batch	...	...	...	...	f£7	10	0

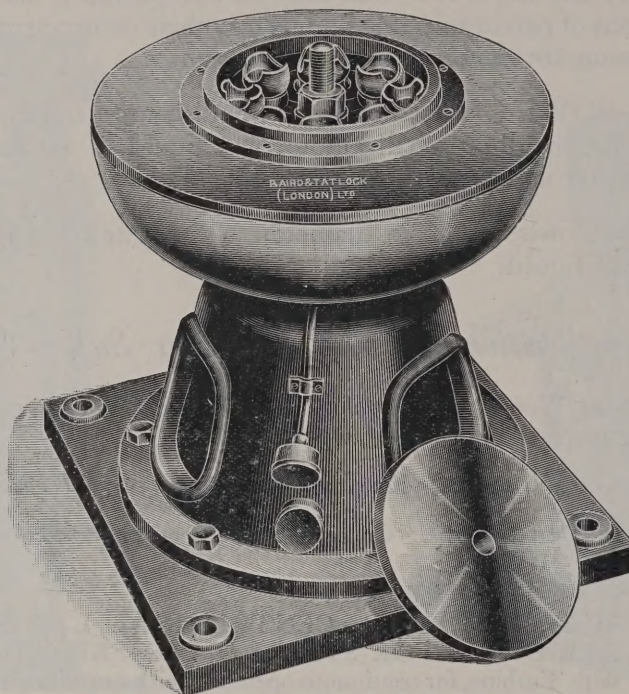
NOTE.—Laboratory machines may be obtained to special order at extra cost with essential parts of monel metal or bronze, or with all parts coming into contact with the liquid plated with copper, gold or silver.

B.T.L. STANDARD LARGE MEDICAL AND INDUSTRIAL CENTRIFUGES.

For the Rapid Handling of Large Quantities of Material

AS SUPPLIED TO
MEDICAL SCHOOLS
METROPOLITAN
WATER BOARD

ADMIRALTY
AND
WAR OFFICE
ETC.



SC1150-SC1160
CONSTRUCTION.

The inner vessels, of heavy glass, have a capacity of 100 or 200 ml. and are contained in nickel-plated buckets turned out of solid mild steel bar. The buckets are fitted with massive trunnions which allow free movement in the vertical plane, so that the buckets hang vertically when at rest.

The revolving head is machined from a heavy steel casting; the separate illustration shows the ample reserve of strength of this component.

The revolving head is mounted on a steel shaft which runs in a set of compound ball and roller bearings, specially designed for us by The Hoffmann Manufacturing Co., Ltd.

These bearings follow the best engineering practice, adequate provision being made for both vertical and side thrusts and friction being reduced to a minimum.

The housing for the machine consists of a cast-steel cone-shaped pedestal, mounted on a heavy steel base-plate; holes are provided in the base-plate for bolting down to a concrete bed.

FINISH.

White Enamel and Nickel Plate.

TESTS.

Before being sent out from our factory, each machine is subjected to the most exacting tests, occupying a period of 24 hours.

First of all a series of preliminary runs is carried out, in the course of which the balance of the moving parts is perfected, until vibrationless running is obtained at all speeds up to the maximum.

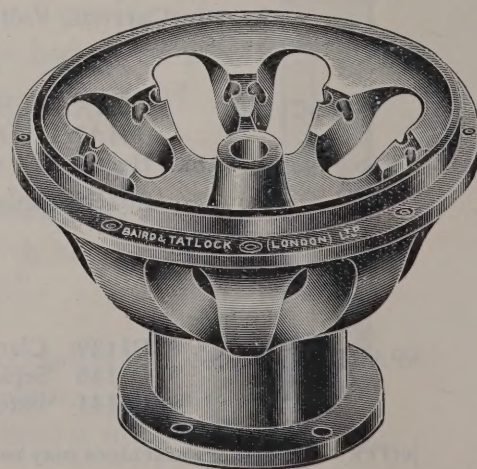
Secondly, the machine is given a run under full load conditions for a period of 4 hours, at a speed of 3500 r.p.m.

As a final test, a run of $\frac{1}{2}$ hour's duration is carried out at a speed of 4000 r.p.m.

SPEED.

The machine can be run for 3 or 4 hours on end at a speed of 3500 r.p.m. without overheating the bearings. This speed should not be exceeded on account of the danger of collapse of the glass containing vessels.

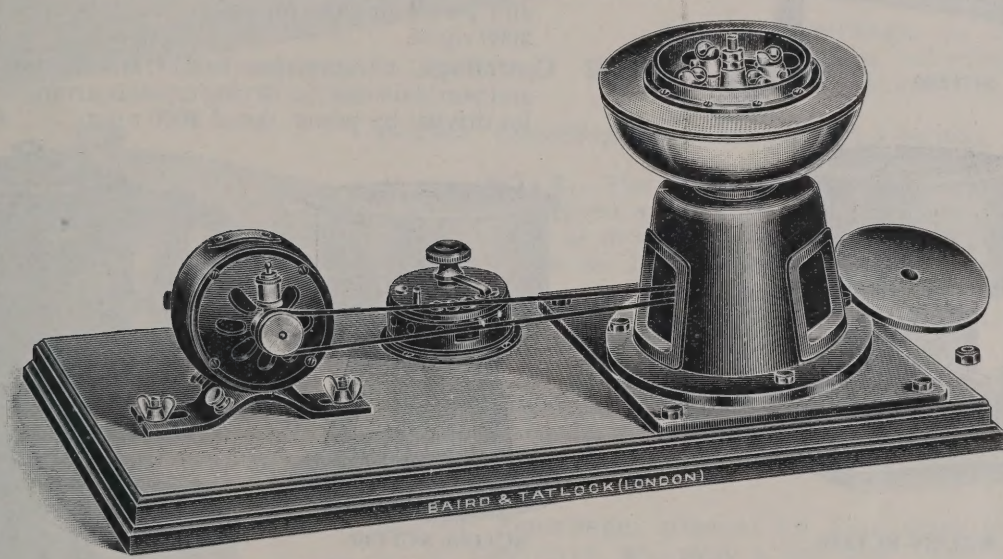
So perfect is the balance, and consequently so smooth and vibrationless the motion, that when the machine is running at full speed it has the appearance of being at rest.



Showing carriers cut in the solid to support buckets.

SIZES.			
SC1150	Centrifuge, to carry 4 tubes of 100 ml. each.	Price of machine only	 d £75 0 0
SC1151	Centrifuge, to carry 8 tubes of 100 ml. each.	Price of machine only	 d £120 0 0
SC1152	Electric Motor for A.C. or D.C., 1 h.p., complete with starter and regulator, suitable for above machines		 d £20 0 0
SC1156	Centrifuge, to carry 4 tubes of 200 ml. each.	Price of machine only	 d £95 0 0
SC1158	Electric Motor for A.C. or D.C., 2 h.p., complete with starter and regulator, cut-outs, switch, slide rails for fixing motor suitable for the 200 ml. machines		 d £28 0 0
SC1160	Safety Guard, of stout wood, lined with $\frac{1}{16}$ in. sheet-iron, movable hinged cover, providing easy access to the centrifuge, suitable for the above machines		 d £9 0 0

Other sizes made to order.



SC1164-SC1166 (Registered No. 536815.)

These **Centrifuges**, our **Registered Pattern**, are made to carry four tubes, and are on heavy mahogany base, with motor and starter resistance.

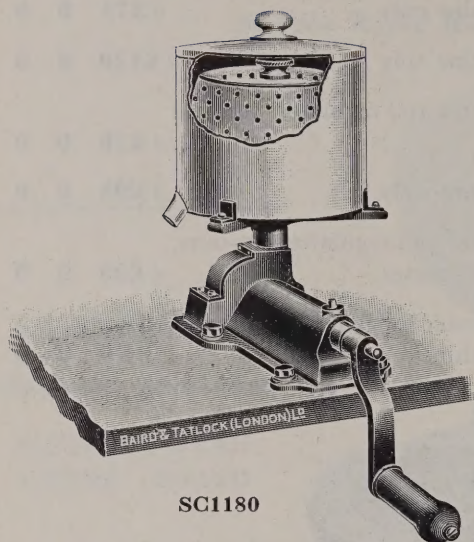
They are solidly constructed to run at a maximum speed of 3500 revolutions per minute. The revolving head is mounted on a vertical steel driving shaft which runs between four sets of steel ball bearings; two sets of bearings carry the load while the other two prevent side movement. The head is enclosed in a spun copper guard (with movable cover) to reduce the air resistance. Machine should be mounted on a steady platform or table and securely fixed to prevent any possible vibration.

SC1164	Centrifuge, as above, to carry four tubes, each 25 ml.	....	.... d £33 0 0
SC1166	Centrifuge, as above, to carry four tubes, each 50 ml.	....	.... d £36 0 0
SC1169	Electric Motor, $\frac{1}{3}$ h.p., and Speed Regulating Starter , no voltage release type, for use with above, for continuous current		 d £10 0 0
SC1170	Electric Motor, as above, but alternating current.		Price d £12 0 0

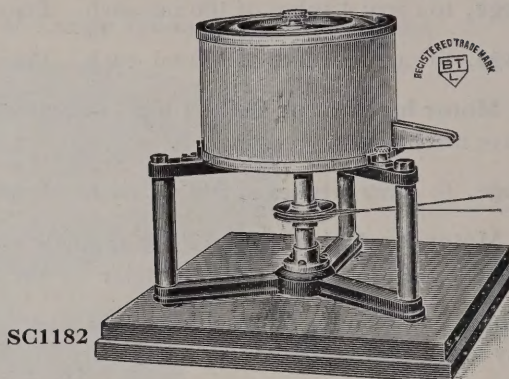
Please state voltage and nature of current when ordering.

For Tubes see page 179.

REVOLVING DRUM CENTRIFUGES.



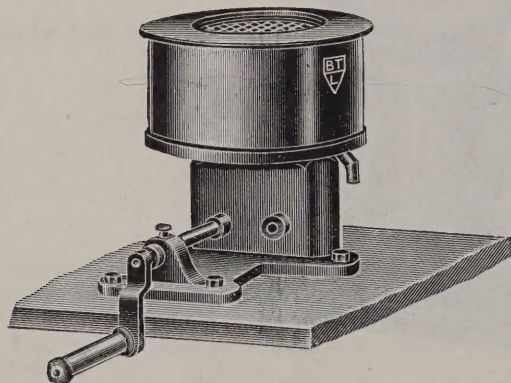
SC1180



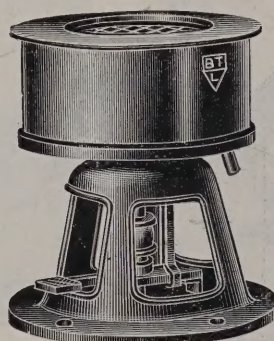
SC1182

SC1180 Centrifuge, with porcelain basket, size 6 x 4 in. and porcelain case, for drying crystals, speed 2000 r.p.m. d £11 10 0

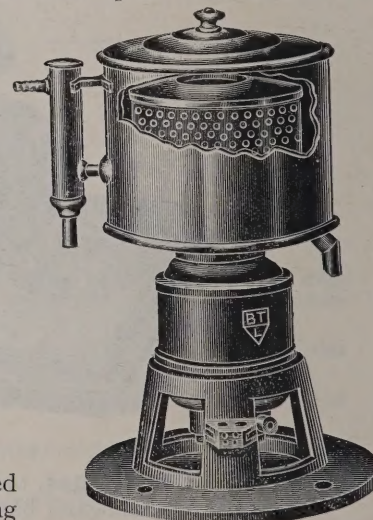
SC1182 Centrifuge, with porcelain basket, size 6 x 4 in. and porcelain case, for drying crystals, arranged for driving by power, speed 2000 r.p.m. d £11 10 0



SC1184-SC1186



SC1188-SC1190



SC1192

SC1184 Centrifuge, hand-driven, with perforated basket of heavily tinned copper mounted on heavy iron base, all gears totally enclosed, running in oil, worm-driven, capable of attaining a speed of 3000 r.p.m.

Size	A	B	C
Size of basket	4 x 4	6 x 4	8 x 4 3/4 in.
Price	d £11 0 0	d £12 10 0	d £13 15 0

SC1186 Centrifuge, as above, but with porcelain basket and case, size 6 x 4 in., to run at 2000 r.p.m. d £15 0 0

SC1188 Centrifuge, power-driven, mounted on heavy base, with perforated basket of heavily tinned copper, adapted to run at 2500 r.p.m.

Size	A	B	C
Size of basket	8 x 4 3/4	12 x 7 1/8	16 x 8 in.
Price	d £13 10 0	d £25 10 0	d £35 0 0

SC1190 Centrifuge, as above, but with porcelain basket and case, size 6 x 4 in., to run at 2000 r.p.m. d £14 0 0

SC1192 Centrifuge, on heavy base, complete with motor, rheostat, heavily tinned perforated copper basket, 6 x 4 in., outer jacket for hot water, steam, etc. Arranged for speeds of 3000, 2000 or 1000 r.p.m. d £25 0 0

Please state voltage and nature of current when ordering.



SC1194

SC1194 Centrifuge for the Determination of Water and Sediment in Oils, with electric drive.

The centrifuge consists of a vertical motor with heavy spindle on which is mounted two standard I.P.T. buckets to take 100 ml. tubes (SC1221). The centrifuge is protected by a heavy guard and is designed to run at 1500 r.p.m. Price complete on wooden base, with plug and adjustable rheostat arranged for D.C. e £22 0 0

SC1196 Centrifuge, as above, but with 4 buckets e £24 10 0

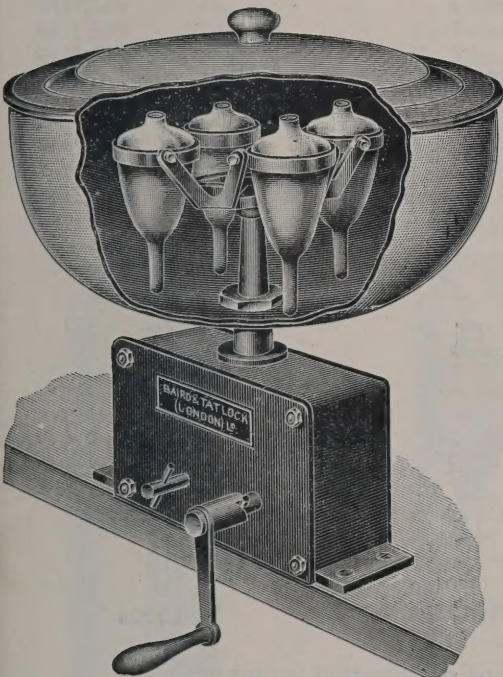
SC1198 Centrifuge, as SC1194, with 2 buckets, but arranged for A.C. Price complete e £27 5 0

SC1202 Centrifuge, as above, but with 4 buckets e £28 10 0

NOTE.—The illustration shows the centrifuge designed to carry Centrifuge Tubes SC1220, but as this pattern of tube has been omitted from the 1929 edition of the I.P.T. Handbook the centrifuge will now invariably be supplied with buckets to take the standard pattern tubes SC1221.

Centrifuges with buckets to take tapered tubes SC1220 as illustrated can still be made to order.

(Please state voltage when ordering.)



SC1204

SC1204 Centrifuge, arranged for hand drive to work at 1500 r.p.m., and carry 4 Centrifuge Tubes 100 ml. capacity, No. SC1221; strongly made with phosphor-bronze wheels, copper guard, and flanges for screwing to bench e £22 0 0

SC1206 Centrifuge, as above, but adapted to carry two tubes only e £19 10 0

These centrifuges can be supplied at the same price to carry Centrifuge Tubes No. SC1220.

The above centrifuges conform to I.P.T. serial designation F.O.14a, A.S.T.M. Serial designation D. 96-28, and are used in tests on petroleum products occurring in Classes IX., XII. of the Institution of Petroleum Technologists' 1929 Handbook.

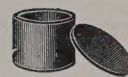
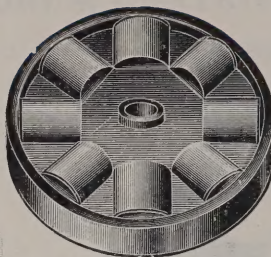
SC1208 Centrifuge, with hand drive as SC1204, complying with the Admiralty specification for lubricating oil, and arranged to carry 4 buckets of 50 ml. each, to run at 1500 r.p.m. e £20 0 0

SC1210 Centrifuge, as above, but adapted with spindle for power drive e £18 10 0

For Gerber Centrifuges
Leffmann Beam Centrifuges } See Milk Section XXVI.
Babcock Centrifuges



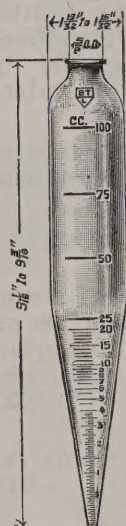
SC1214



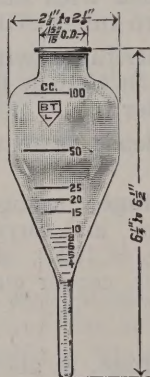
SC1216

- SC1214 Centrifuge for determining Moisture Equivalents**, vertical pattern, as used in the American Bureau of Agriculture, with plate, arranged for carrying 8 standard cylindrical soil tins or cups, centrifuge accurately balanced and arranged for running at 5000 r.p.m. Complete with indicator and motor, for alternating current d £69 10 0
- SC1215 Centrifuge**, as above, but suitable for direct current d £67 10 0
- SC1216 Cylindrical Cups**, metal, standard size for use with ditto each d £0 5 0

CENTRIFUGE TUBES.



SC1220



SC1221

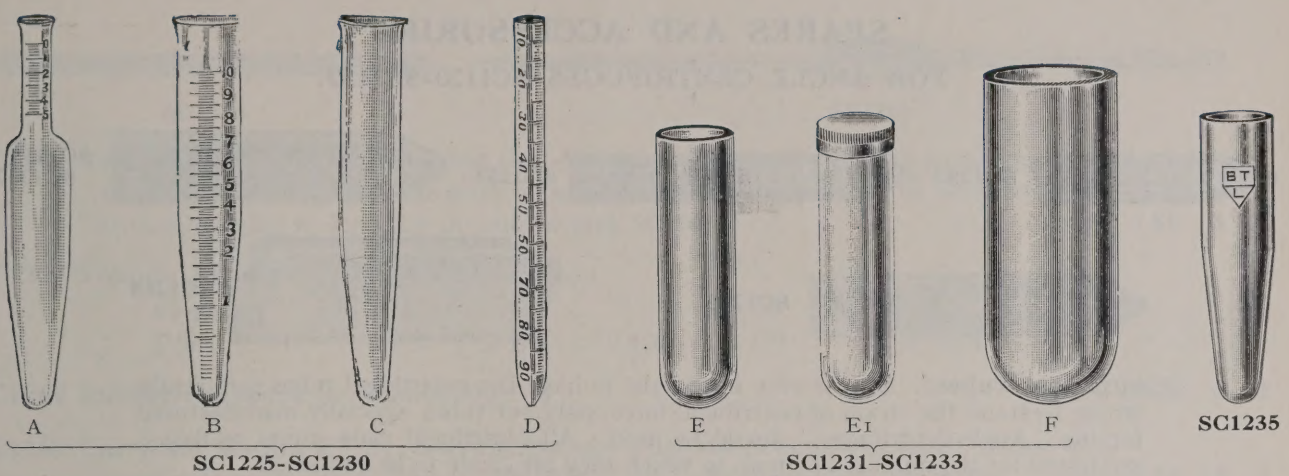


SC1223



SC1224

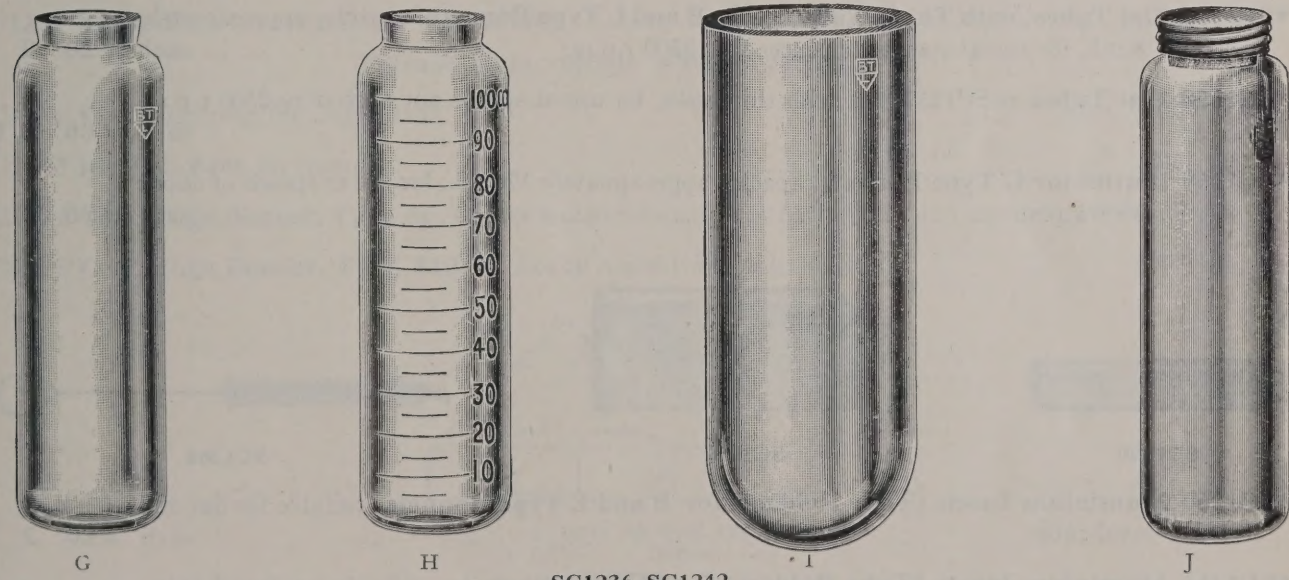
- SC1220 Centrifuge Tubes**, 100 ml. capacity, graduated to standard specification, suitable for Centrifuge No. SC1194 each c £0 8 6
These can also be supplied with N.P.L. Certificate at an extra cost.
- SC1221 Centrifuge Tubes**, 100 ml. capacity, graduated to standard I.P.T. specification. ,, c £0 8 6
These can also be supplied with N.P.L. Certificate at an extra cost.
- SC1222 Stoppers**, I.R., for above, to suit SC1220, size $\frac{5}{8}$ in. b £0 0 $2\frac{1}{2}$
 SC1221, size $\frac{15}{16}$ in. b £0 0 5
- SC1223 Centrifuge Tubes**. Graduated, Capacity 50 ml., complying with Admiralty specification, to suit Centrifuge SC1208. Price c 60/- per dozen.
- SC1224** ,, ,, Plain, Capacity 50 ml., to suit Centrifuge SC1208. Price c 36/- per dozen.



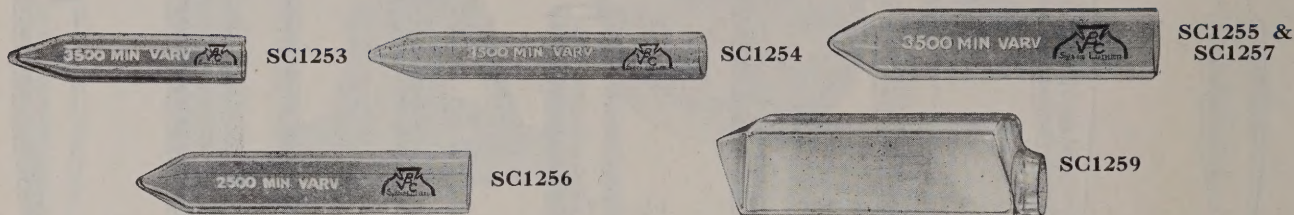
SC1225	Centrifuge Tubes.	A. Milk Tubes for Centrifuges Nos.	SC980-SC996	....	each	a £0	1	6
SC1226	“	B. Urine “ “ “	SC980-SC996	....	“	a £0	1	6
SC1227	“	C. Conical “ “ “	SC980-SC996, Plain	per doz.	a £0	2	0	
SC1228	“	C. Conical “ “ “	SC980-SC996, Slip on Cap	“	a £0	2	6	
SC1229	“	C. Conical “ “ “	SC980-SC996, Screw Cap	“	a £0	3	0	
SC1230	“	D. Blood “ “ “	SC980-SC996	....	each	a £0	2	6

Centrifuge Tubes for Martin Centrifuges Type E, EI, F.

	Capacity	2	5	10	15	20	25	50 ml.
SC1231	Plain,	a 9d.	a 10d.	a 1/-	a 1/3	a 1/6	a 2/-	a 3/- per dozen.
SC1232	With slip on cap,	a 1/-	a 1/1	a 1/3	a 1/6	a 1/9	a 2/6	a 4/- „
SC1233	With screw cap,	a 1/6	a 1/7	a 1/9	a 2/-	a 2/3	a 3/-	a 5/- „
SC1235	Centrifuge Tubes.	Conical, 15 ml., to fit 20 ml. Martin's Buckets.					 per doz.	a £0 3 6

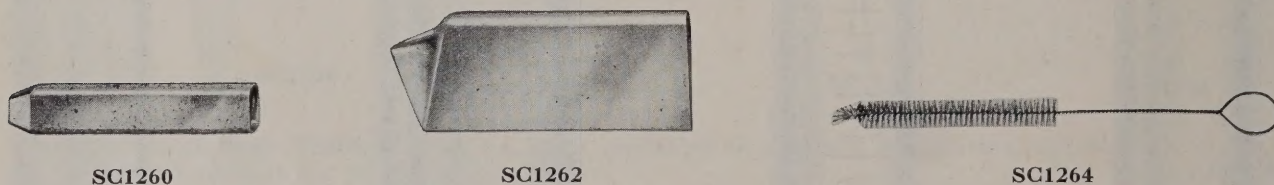


SC1236	Centrifuge Tubes.	G. Plain, to suit Centrifuges	Capacity	25	50	100 ml.
SC1238	"	SC1150-SC1151, SC1164-SC1166.	Price	c 15/-	c 18/-	c 30/- per dozen.
SC1240	"	H. Graduated, to suit Centrifuges	Capacity	50	100 ml.,	
SC1242	"	SC1150-SC1151, SC1164-SC1166.	Price	c 36/-	c 54/- per dozen.	
		I. Plain, to suit Centrifuges SC1156.	Capacity	200 ml.,	Price	c 42/- per dozen.
		J. Plain, with screw cap for sterile centrifuging.	Capacity	50 ml.,	Price	c 30/- per dozen.

SPARES AND ACCESSORIES
FOR ANGLE CENTRIFUGES SC1120-SC1132.

Centrifugal Tubes. As it is very important to have the centrifugal tubes sufficiently strong to stand the strain of centrifugal force, only our tubes, specially manufactured for the "Angle Centrifuges," should be used. All centrifugal vials (tubes or flasks) are tested for the number of r.p.m. to which they are likely to be subjected.

- *SC1253 Round Tubes for Wassermann Bonnets, Type M, capacity approximately 8 ml., for use at speeds up to 5000 r.p.m. each d £0 0 8
- *SC1254 Round Tubes for A, B and L Type Bonnets, capacity approximately 8 ml., for use at speeds up to 5000 r.p.m. each d £0 0 8
- *SC1255 Oval Tubes, with Thick Walls, for A, B and L Type Bonnets, capacity approximately 12 ml., for use at speeds not exceeding 3500 r.p.m. each d £0 1 9
- *SC1256 Oval Tubes as SC1255, but with thin walls, for use at speeds not exceeding 2500 r.p.m. each d £0 0 9
- *SC1257 Flat Tubes, with Thick Walls, for A, B and L Type Bonnets, capacity approximately 8 ml., for use at speeds not exceeding 3500 r.p.m. each d £0 2 0
- *SC1258 Flat Tubes as SC1257, but with thin walls, for use at speeds not exceeding 2500 r.p.m. each d £0 0 10
- *SC1259 Bottles for G Type Bonnet, capacity approximately 170 ml., for use at speeds of about 3500 r.p.m. each d £0 5 6



- *SC1260 Aluminium Insets (Tube Holders) for B and L Type Bonnets, suitable for flat and oval tubes each d £0 2 9
- *SC1261 Aluminium Insets (Tube Holders) for M Type Bonnets, suitable for round tubes each d £0 2 3
- *SC1262 Aluminium Insets for G Type Bonnets, for use with bottles of approximately 170 ml. capacity each d £1 17 6
- *SC1263 Rubber Insertions for use with SC1262 ,, d £0 1 6
- *SC1264 Brushes for Cleaning, for centrifugal tubes, flat, suitable for 8 and 12 ml. tubes ,, d £0 1 0



SC1265



SC1266

***SC1265 Volume Pipette for determining Cell-Volume.** These pipettes will stand speeds up to 10,000 r.p.m. Should the small glass hooks break, new ones can be fused on. The bottom opening is closed by the rubber plug SC1267 each *d* £0 3 6

***SC1266 Volume Pipettes**, specially for flat tubes.

Capacity	....	1	2	5	10	25 ml.
Price	....	<i>d</i> 1/3	<i>d</i> 1/3	<i>d</i> 1/6	<i>d</i> 1/9	<i>d</i> 2/9 each.

***SC1267 Rubber Stoppers** for Volume Pipettes per 100 *d* £0 6 0

***SC1268 Universal Motors** for use on continuous and alternating current, mounted on cast-iron stand with rubber feet. Speed 2500-4000 r.p.m. Maximum load 125 watts each *d* £5 15 0

***SC1269 Universal Motors**, as above, but for maximum load of 250 watts. As used with power centrifuge SC1128 each *d* £14 0 0

(Please state voltage when ordering.)

NOTE.—The above motors should never be connected up without a rheostat.

***SC1270 Regulating Rheostats** for use with SC1268. The rheostats are provided with switch and are fitted with a stop at the minimum resistance suitable for the voltage to which the motor is connected. This stop must never be disturbed unless the motor is used on a different circuit each *d* £2 2 6

***SC1271 Rheostat**, as above, for use with SC1269 „ *d* £4 12 6

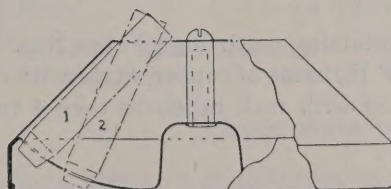
(Please state voltage when ordering.)

***SC1272 Flex** with plug for connection each *d* £0 5 0

***SC1273 Rubber Feet** for motors „ *d* £0 2 3

***SC1274 Centrifuge Bonnet, Type A6**, to take 6 oval tubes as in SC1120 (without Tube Holders) *d* £7 10 3

***SC1275 Centrifuge Bonnet, Type A10**, to take 10 round tubes as in SC1122 „ „ *d* £7 10 0



1. 45° ANGLE FOR URINE, ETC.
2. 25° " " BLOOD, "

SC1276

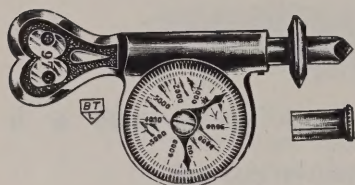
Diagram of Bonnet, Type B & BE-EM.

***SC1276 Centrifuge Bonnet, Type B and BE-EM**, as in SC1130-SC1132 (without Tube Holders) *d* £1 5 0

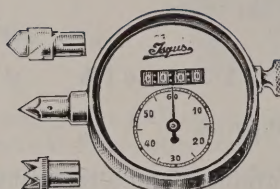
***SC1277 Centrifuge Bonnet, Type L**, as in SC1124 „ „ *d* £8 15 0

***SC1278 Centrifuge Bonnet, Type M**, as in SC1126 „ „ *d* £14 0 0

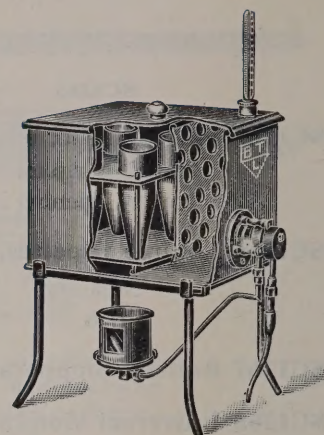
***SC1279 Centrifuge Bonnet, Type G**, as in SC1128 „ „ *d* £38 5 0



SC1288



SC1289



SC1290

***SC1288 Speed Counter**, for measuring speed of rotation, registering 10,000 revolutions, nickel-plated, with bell e £0 18 6

***SC1289 Revolution Counter**, with combined stopwatch, non-magnetic. Range up to 9999 r.p.m. d £1 17 6

This improved Revolution Counter embodies features which place the instrument far in advance of the ordinary worm-gear disc type counter. Whilst the latter involves the use of a watch and a certain amount of skill to obtain reliable results, this counter registers accurately and automatically the number of revs. in any given period up to one minute. The count can be read off at a glance, and as the timing mechanism operates together with the counter-mechanism absolutely reliable results can be guaranteed.

The counter and clockwork mechanisms are connected with each other and are put in or out of action simultaneously. To render the instrument foolproof a spring-actuated "free wheel" device is interposed between the test spindle and the mechanism. The counter and clockwork therefore only start to indicate when sufficient pressure is applied at the test point to overcome the free-wheel action.

The zero adjustment of the figures, the setting of the seconds indicator to its initial position and the winding up of the clockwork are all effected by one single turn (clock-wise) of the knurled button. The instrument can therefore always be ready for use at a moment's notice.

The counter runs equally well for testing left or right-hand motion; the reading, however, is always registered in the forward direction only. The clockwork runs for one minute.

All working parts are made from the best materials by skilled watchmakers and the perfect synchronism of counter and clock ensures reliability under continuous hard wear. The figures on dial and counter are black on a silver-white background, and the whole instrument is enclosed in a dust-proof, heavily nickel-plated metal casing.

Complete with two rubber-ended spindle attachments in a neat padded case.

SC1290 Water or Oil Bath, for maintaining Centrifuge Tubes Nos. SC1220 and SC1221 at a standard temperature of 100° F., made of copper, fitted with our Registered Automatic Capsule Regulator, and fitted with rack inside to take 4 tubes, either pattern, and arranged for heating by gas c £6 6 0

SC1291 Water Bath, as above, but adapted for heating by electricity c £6 6 0
Consumption in watts, 125.

SC1292 Spare Heater for above, complete c £0 15 0

Please state voltage when ordering.

SECTION II f

Drying Ovens.

All the Drying Ovens illustrated and described are made at our
B.T.L. INSTRUMENT WORKS at WALTHAMSTOW.

As actual manufacturers of Ovens of all kinds we are able to make and specialize in Ovens for particular purposes. Ovens can be supplied with any number of chambers of varying sizes, with or without constant level, made of copper or other metal, with or without insulation panels of patent heat-resisting material, for use on stands or on brackets. Arranged for heating by gas, electricity, oil, or steam.

(A) Ovens for Hot Air.

(B) Ovens for Hot Water.

(C) Brazed Ovens for temperatures above 100° C.

Ovens for Leather Testing

„ Bread „
„ Paper „

See the special sections
for these trades.

A. HOT AIR DRYING OVENS AND STERILISERS.

SC1300 Drying Oven, hot air, single jacketed, of stout hard copper, with extra iron plate riveted to bottom, one sliding shelf on runners in centre, air regulator fitted on door.

Height inside	5	6	7	8	9	10	10 in.
Width „	5	6	7	8	9	10	12 „
Depth „	5	6	7	8	9	10	10 „
Prices, with stand	c 25/-	c 28/6	c 30/-	c 31/-	c 37/6	c 45/-	c 65/-

SC1301 Drying Oven, hot air, single jacketed, with stand, specially manufactured for school use, size 6 x 6 x 6 in. c £0 16 6

SC1302 Drying Oven, as SC1300, but electrically heated.

Size	6 in.	8 in.	10 in.	12 x 10 x 10 in.
Consumption in watts	450	500	600	700
Price	c £4 10 6	c £5 0 0	c £5 13 6	c £6 8 0

SC1304 Spare Heaters

for above, 1 in set c £1 12 0 c £1 15 0 c £1 17 6 c £2 0 0 each.

SC1300

Please state voltage when ordering.

SC1306 Drying Oven, hot air, single jacketed, as SC1300, but of Stainless Steel, with one sliding shelf on runners in centre, ventilators at bottom of door and at back of oven at top, fitted with tubulure for thermometer, complete on iron stand.

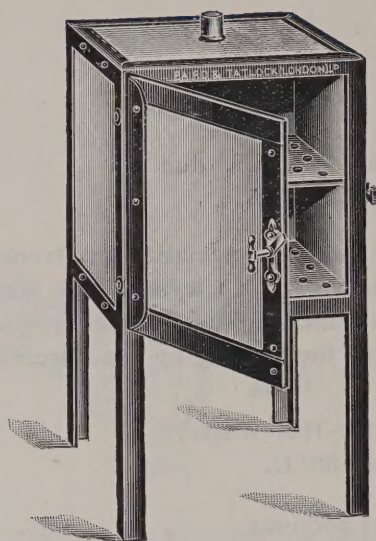
Size	8 x 8 x 8 in.	10 x 10 x 10 in.	12 x 12 x 12 in.
Price	c £3 18 0	c £5 0 0	c £6 12 6

SC1307 Drying Ovens, Stainless Steel, as above, but electrically heated.

Size	8 x 8 x 8 in.	10 x 10 x 10 in.	12 x 12 x 12 in.
Consumption in watts	500	600	700
Price	c £7 7 0	c £8 8 0	c £9 15 0

SC1308 Spare Heaters, for above, 1 in set c 35/- c 37/6 c 40/- each.

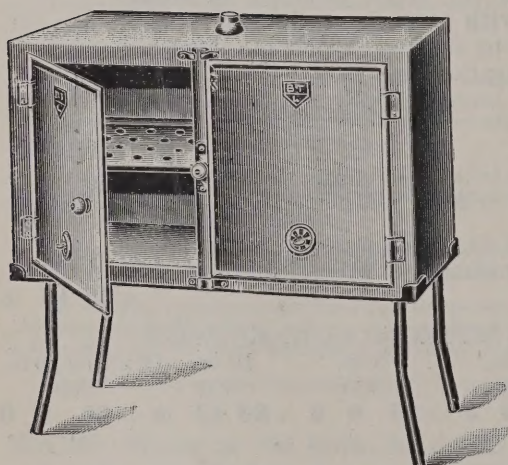
Please state voltage when ordering.



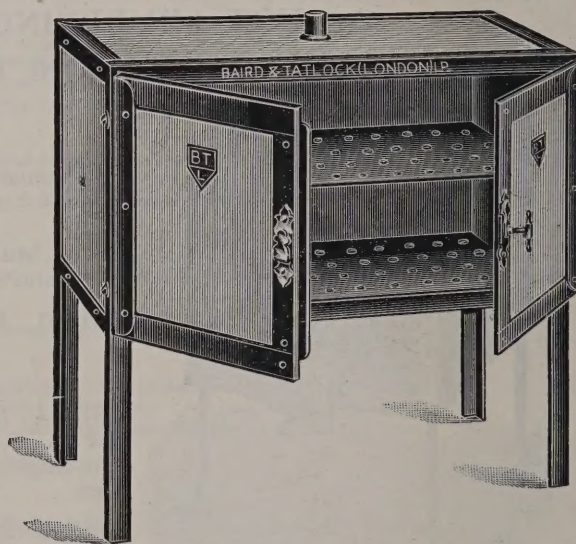
SC1310

SC1310 Drying Ovens, hot air, angle iron frame, with solacite sides and top, and removable stout iron plate at bottom.

Height inside	....	6	8	9	10	10 in.
Width	„	6	8	9	10	12 „
Depth	„	6	8	9	10	10 „
Price	....	c 35/-	c 45/-	c 55/-	c 70/-	c 80/-



SC1316



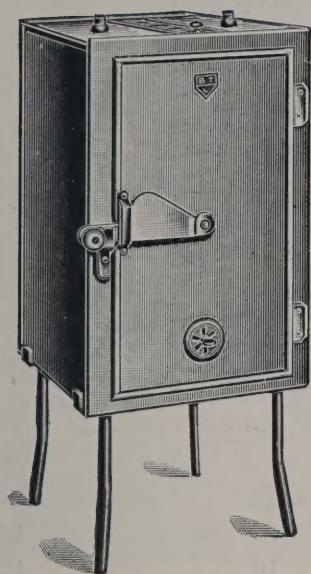
SC1318

SC1316 Drying Oven, oblong pattern, of stout hard-rolled copper, with one shelf, single walls.

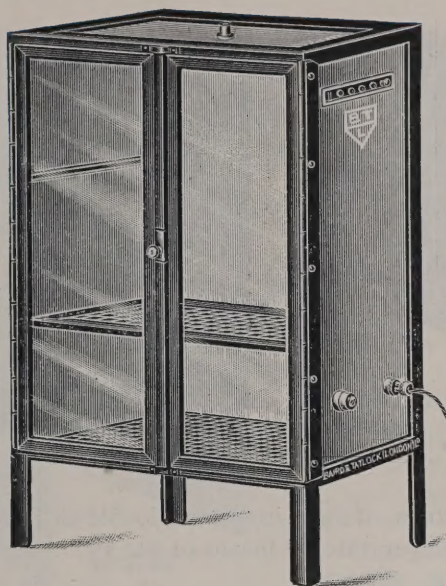
Height	....	8	10	10	10	10 in.
Length	....	16	16	20	18	20 „
Depth	....	8	8	8	10	12 „
Price	....	c £3 15 0	c £4 2 6	c £4 10 0	c £5 0 0	c £5 5 0

SC1318 Drying Oven, oblong pattern, with one removable shelf, made of hard asbestos compound in stout iron frame, with removable iron bottom plate.

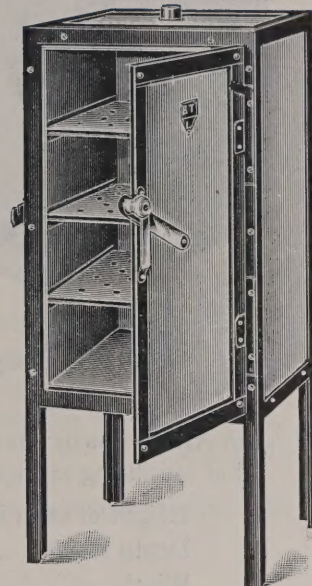
Height	....	8	10	10	10	10 in.
Length	....	16	16	20	18	20 „
Depth	....	8	8	8	10	12 „
Price	....	c £3 10 0	c £3 17 6	c £4 5 0	c £4 15 0	c £5 0 0



SC1320



SC1325



SC1324

SC1320 Drying Oven, tall form, of stout hard-rolled copper, for heating by hot air, double jacketed, with 3 removable shelves.

Height inside	....	....	....	16	18 in.
Depth	„	....	....	9	10 „
Width	„	....	....	10	12 „
Price	....	....	....	c £7 5 0	c £8 12 6

SC1324 Drying Oven, as SC1320, with 3 removable shelves, single walls made of hard asbestos compound with stout iron frame and removable heavy iron bottom plate.

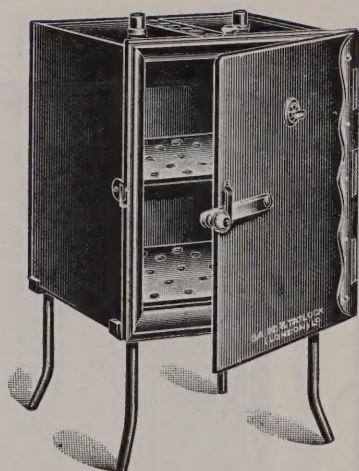
Height inside	....	....	....	16	18 in.
Depth	„	....	....	9	10 „
Width	„	....	....	10	12 „
Price	....	....	....	c £5 5 0	c £6 10 0

SC1325 Hot Air Ovens, for drying glassware, of hard asbestos compound, fitted into angle iron frame and provided with double glass doors. The ovens are electrically heated and are fitted with 3-heat regulating switch.

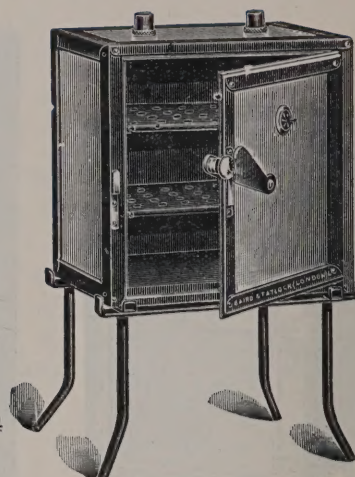
(Please state voltage when ordering.)

Height	....	36	24	18	12 in.
Width	....	24	18	12	12 „
Depth	....	12	12	12	12 „
Consumption in watts		3300	2200	1100	750
Price	....	c £16 0 0	c £14 10 0	c £12 10 0	c £9 0 0

SC1326 Spare Heaters for above (1 per set) c £2 8 0 c £1 18 6 c £1 13 6 c £1 12 0



SC1327-SC1328



SC1334

SC1327 Hot Air Ovens or Sterilizers, of sheet-iron, with double air jacket and ventilator at top.
For sterilizing at high temperature by means of hot air.

Height of oven inside	....	....	11	12	14 in.
Depth inside	....	....	7	10	12 „
Width „	....	....	9	10	12 „
A. Prices in iron, with stand	....	c £3 12 0	c £4 4 0	c £5 5 0	
B. Price covered with asbestos, extra	....	c £1 3 0	c £1 10 0	c £1 12 0	

Thermometers extra.

SC1328 Hot Air Ovens or Sterilizers, as above, but made in copper throughout.

Height inside	....	....	11	12	14 in.
Depth „	....	....	7	10	12 „
Width „	....	....	9	10	12 „
A. Price with stand	....	c £4 14 0	c £6 5 0	c £7 15 0	
B. Price covered with asbestos, extra	....	c £1 3 0	c £1 10 0	c £1 12 0	

SC1330 Hot Air Ovens or Sterilizers, in copper, as above, arranged for electrical heating.

Size	....	....	11 × 7 × 9	12 × 10 × 10	14 × 12 × 12 in.
Consumption in watts	....	....	900	1000	1200
Price	....	....	c £8 10 0	c £9 16 0	c £11 13 6

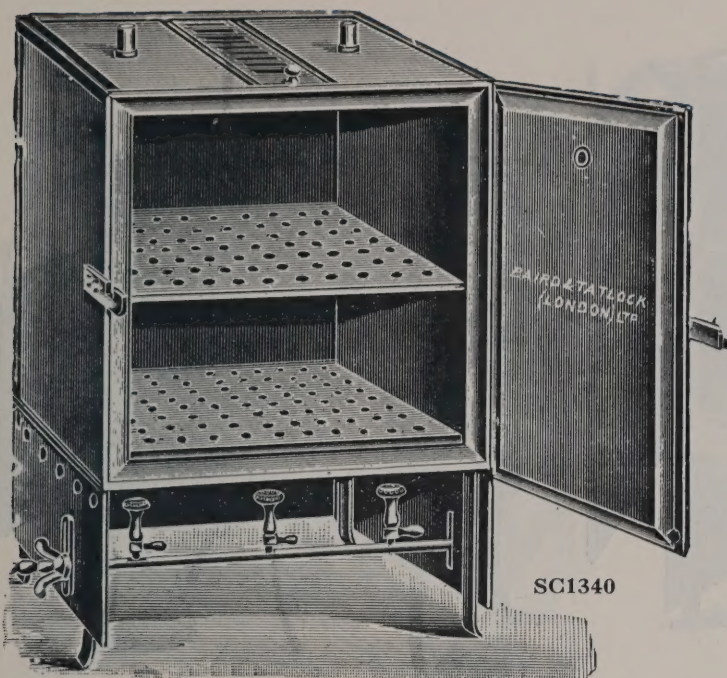
SC1332 Spare Heater for above (1 in set) c 44/6 c 46/6 c 52/- each.

Please state voltage when ordering.

SC1334 Hot Air Ovens or Sterilizers, copper, covered with asbestos (single jacketed), on stand, with two shelves.

A. 12 × 8 × 8 in. inside	....	....	....	....	c £3 15 0
B. 12 × 12 × 8 in. „	....	....	....	....	c £4 10 0
C. 14 × 12 × 8 in. „	....	....	....	....	c £5 17 6

Ovens of any special design or size made to order.



SC1340

SC1340 Hot Air Oven or Sterilizer, double walls, asbestos covered, 14 × 14 × 16 in. high, with perforated false bottom and movable shelf in centre, mounted on iron screen with set of three rose burners, complete.

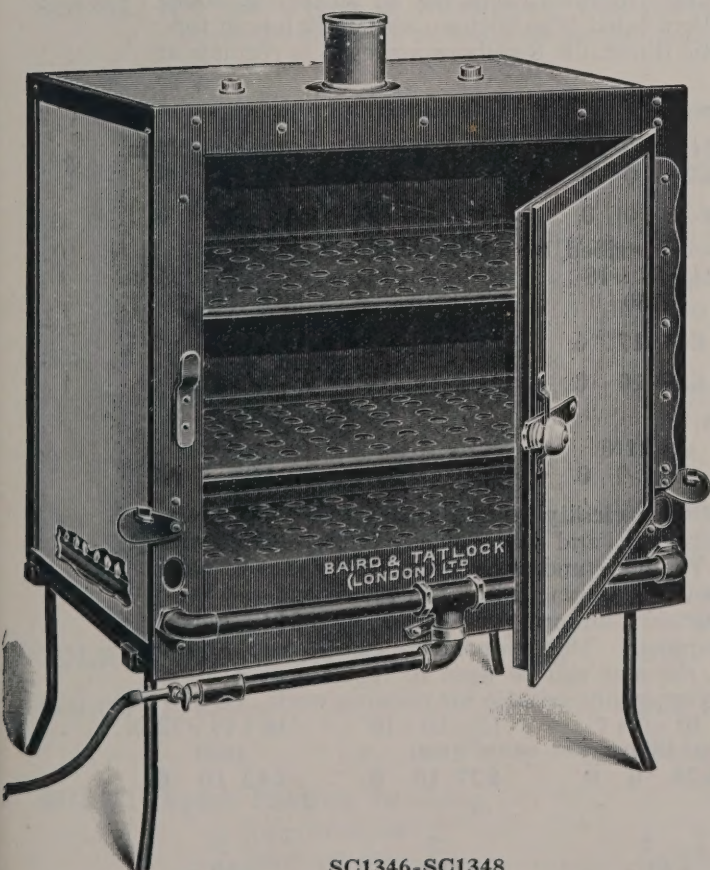
- A. Price in copper c £12 10 0
B. Price in mild steel c £10 10 0

SC1342 Hot Air Oven or Sterilizer, copper, as above, but electrically heated.

Consumption in watts, 1600

Price c £16 17 6

SC1344 Spare Heater for above c £3 7 6



SC1346-SC1348

Hot Air Oven or Sterilizer, with special heating arrangement. The sterilizer has triple walls, and is covered with asbestos on the outside, the gas burners being placed between the two outer walls; the air circulates, thereby preventing loss of heat and keeping a more uniform temperature inside than when heated only at bottom. In about twenty minutes a temperature of about 150° C. can be reached and maintained.

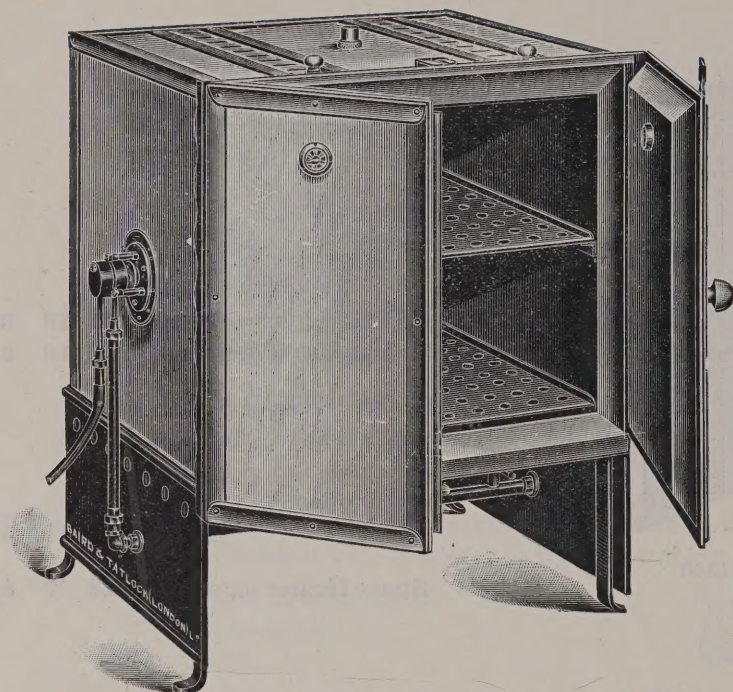
No.	1	2	3	4
Height inside	12	16	16	24 in.
Width inside	10	12	24	32 „
Back to front	8	12	16	20 „

SC1346 Price in copper on stand

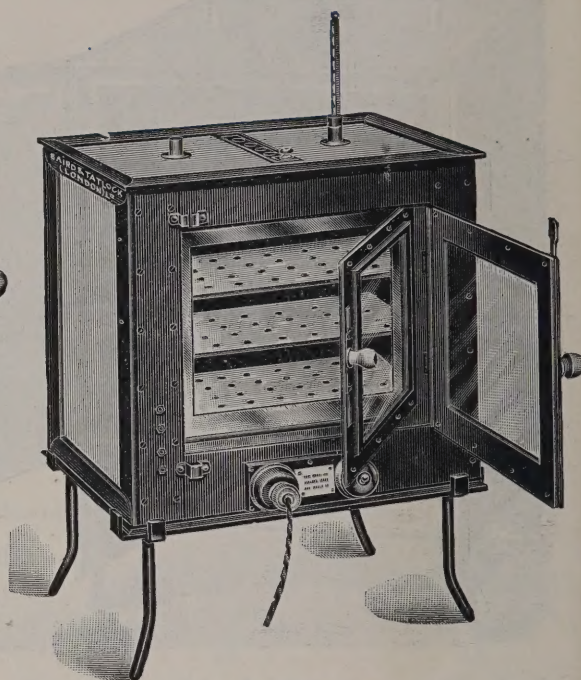
- No. 1 c £10 0 0 No. 2 c £12 5 0
No. 3 c £16 5 0 No. 4 c £23 15 0

SC1348 Price in mild steel on stand

- No. 1 c £7 15 0 No. 2 c £9 15 0
No. 3 c £13 15 0 No. 4 c £21 15 0



SC1352-SC1354



SC1357

Hot Air Ovens or Sterilizers, with double asbestos-covered hot air jacket and doors, as illustrated; one shelf removable. Perforated false bottom, air ventilators in top; temperature controlled by our Automatic Bimetallic Regulator arranged to regulate at 160° C. Complete with gas burner.

Any other size made to order if desired.

	Size	16 × 16 × 20	24 × 24 × 18	30 × 30 × 20	36 × 30 × 24 in.
SC1352	Price in copper	d £17 17 0	d £28 0 0	d £32 10 0	d £42 0 0
SC1353	Price in mild steel	d £16 12 6	d £23 0 0	d £27 17 6	d £35 17 6

Hot Air Ovens or Sterilizers, all as above described, but for heating by electricity.

	Size	16 × 16 × 20	24 × 24 × 18	30 × 30 × 20	36 × 30 × 24 in.
	Consumption in watts	2000	2750	3750	4500
SC1354	Price in copper	d £22 5 0	d £34 17 6	d £39 12 6	d £48 17 6
SC1355	Price in mild steel	d £20 15 0	d £29 10 0	d £34 0 0	d £42 13 6

SC1356 Spare Heaters.

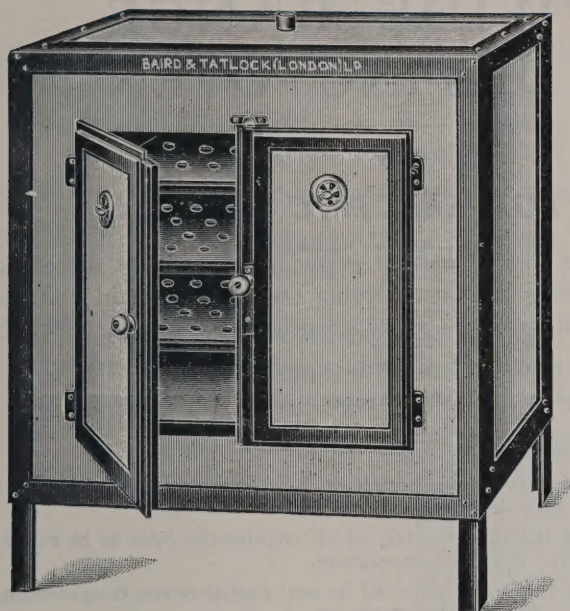
Price, each	d 18/6	d 21/6	d 25/-	d 28/-
Price, per set of 4	d £3 12 0	d £4 4 0	d £4 16 0	d £5 7 0

SC1357 Hot Air Oven, copper, asbestos covered, electrically heated with quadruple walls, the two outer walls being packed with slag wool and the outside chamber covered with asbestos, ensuring perfect insulation. The inner and outer doors are fitted with plate glass for observation. The heating elements are placed between the second and third chamber. The oven is adjusted to maintain a uniform temperature of 160° C., or can be wound for higher temperatures if required. This temperature can be reached and maintained in about 30 minutes. A rheostat can be used to regulate at a lower temperature, if required. This oven is especially suitable for research work.

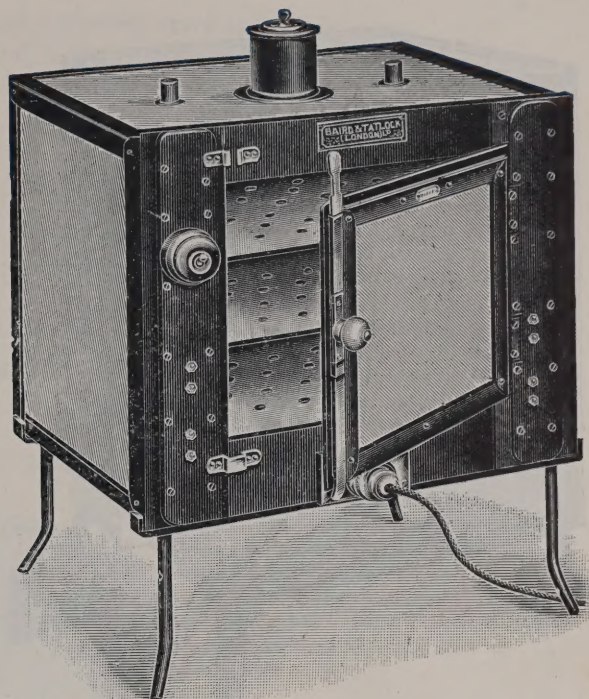
Size	10 × 9 × 7	12 × 10 × 10	14 × 14 × 12 in.
Consumption in watts	1500	1800	2200
Price	c £24 0 0	c £27 10 0	c £32 10 0

SC1358 Spare Heaters for above.

Number in set	2	2	2
Price, per set	c 43/-	c 45/-	c 50/-



SC1362-SC1366



SC1368

SC1362 Hot Air Ovens or Sterilizers, with double walls fitted in metal-panelled frame, covered with asbestos, and with double doors. Adapted for heating by electricity.

Size	....	....	....	....	30 × 30 × 20	36 × 20 × 25 in.
Consumption in watts	....	....	....	....	3900	3900
Price	....	....	....	....	d £41 0 0	d £52 0 0

SC1366 Hot Air Ovens or Sterilizers, as above, adapted for heating by electricity with sliding rheostat.

Size	....	12 × 10 × 10	14 × 12 × 12	12 × 10 × 18	14 × 12 × 20	24 × 24 × 18	30 × 30 × 20	36 × 20 × 25 in.
Consumption in watts	....	900	1150	1200	1550	3600	3900	3900
Price	....	d £19 10 0	d £22 0 0	d £25 10 0	d £28 0 0	d £35 10 0	d £46 0 0	d £57 0 0

SC1367 Spare Heaters for above.

Number in set	9	9	12	12	12	12	12
Price, each	d 7/6	d 7/6	d 7/6	d 8/6	d 8/6	d 8/6	d 8/6
Price, per set	d 66/-	d 66/-	d 88/-	d 100/-	d 100/-	d 100/-	d 100/-

Hot Air Ovens or Sterilizers, as SC1346-SC1348, but electrically heated. This sterilizer has triple walls covered with asbestos; it keeps a uniform temperature of 150° C., which is reached and maintained 30 minutes after switching on the current.

Size	....	....	10 × 9 × 7	12 × 10 × 10	14 × 12 × 12 in.
Consumption in watts	....	....	1500	1800	2000

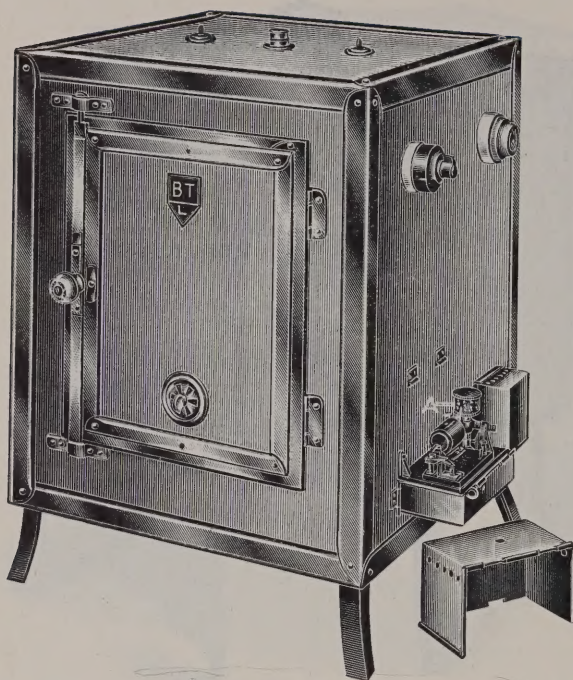
SC1368 In planished steel d £13 5 0 d £16 0 0 d £19 0 0

SC1370 In copper d £15 10 0 d £18 10 0 d £22 0 0

Please state voltage when ordering.

SC1372 Spare Heaters for above.

Number in set	....	2	2	2
Price, per set	....	d 43/-	d 45/-	d 50/-



SC1375

B.T.L. WIDE RANGE DRYING OVEN

25° to 275° C.

FOR ELECTRIC HEATING

After many years of experiment we have succeeded in producing the ideal Drying Oven. The main features which will appeal to every scientist are :—

Wide range of temperature available—25° to 275° C.

Completely reliable Automatic Temperature Control—To $\pm \frac{1}{2}^{\circ}$.

Absolutely Shock Proof.

Uniformity of temperature in all parts of the oven, with a maximum variation of 1°.

Rapid Heating Switch which enables the oven to be run up quickly to the working temperature.

All working parts shielded in neat copper cover, thus avoiding possible disturbance by dusting, etc.

The oven is ready for use at 150° in 20 minutes, and at the highest temperature in less than an hour after being switched on.

Long life of the heating elements ; the wire used being of such generous proportions that it is never subjected to more than half its safe working load.

Simplicity. The operation of these ovens is simplicity itself ; it consists in :

- (1) Setting a switch in one of three positions which are clearly engraved with different ranges of temperatures.
- (2) Setting a graduated drum "A" to the temperature required.

CONSTRUCTION.

The inner chamber is of 20 S.W.G. medium hard-rolled polished copper fitted with perforated copper trays.

This is surrounded by a 1 in. space forming the heating chamber, in which are fitted the heating elements. The heating chamber is enclosed by walls of asbestos compound.

The heating chamber is insulated with slagwool to a depth of 1 in. all round, and the whole is fitted into an outer casing, consisting of solacite panels in an angle iron frame.

The exterior is finished in cellulose enamel.

The heating elements are graded so as to obtain an even distribution of heat, and are placed on the sides and back ; they are divided into small units so that replacement is facilitated and can be made at very small cost.

Access to the heating space is obtained by removing the screws securing the front and withdrawing the inner chamber, thus exposing all the heating elements.

Adequate ventilation of the working space is provided, large adjustable ventilators being fitted on top of the oven near the back and on the lower part of the door.

As an indication of the reliability of these ovens we may mention that out of some hundreds we have supplied since they were introduced four years ago, **we have not yet had a single enquiry for a spare heating element.**

		Height.	Width.	Back to Front.	Consumption in Watts.	Price.
SC1375	No. 1 Oven	12	12	14 in.	1400	d £23 0 0
	No. 2 „	14	12	14 „	1500	d £22 10 0
	No. 3 „	16	14	14 „	1800	d £27 0 0
	No. 4 „	24	16	14 „	2400	d £36 0 0

The large demand in general for our popular Wide Range Oven, and Size No. 2 in particular, has enabled us to make in larger quantities and thus reduce our price.

Full working instructions are sent out with each oven.

SC1376 Inner Door of heat-resisting glass can be fitted at the following extra cost :

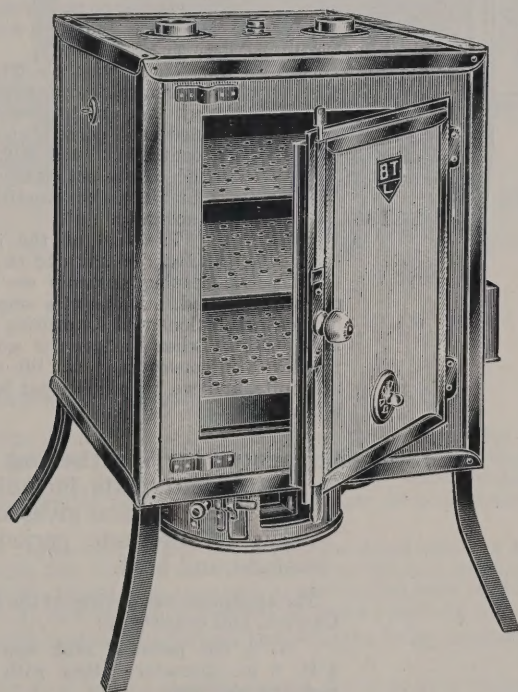
A. No. 1 Oven	d 32/-	C. No. 3 Oven	d 44/6
B. No. 2 „	d 35/-	D. No. 4 „	d 52/-

SC1377 Spare Heaters for	No. 1.	No. 2.	No. 3.	No. 4.
Number in set	12	12	12	12
Price, each	d 7/6	d 7/6	d 9/6	d 10/6
Price, per set	d 88/-	d 88/-	d 110/-	d 122/-

There are twelve heaters in each oven, three each on bottom, back, and both sides.

SC1378 B.T.L. Wide Range Oven, as above, with two chambers each 8 × 8 × 8 in. d £40 0 0
Consumption in watts, 1500.

SC1379 Spare Heaters for same (18 in set) each d £0 6 0 ; per set d £5 5 0
Ovens to suit individual requirements made to order. Prices on application.



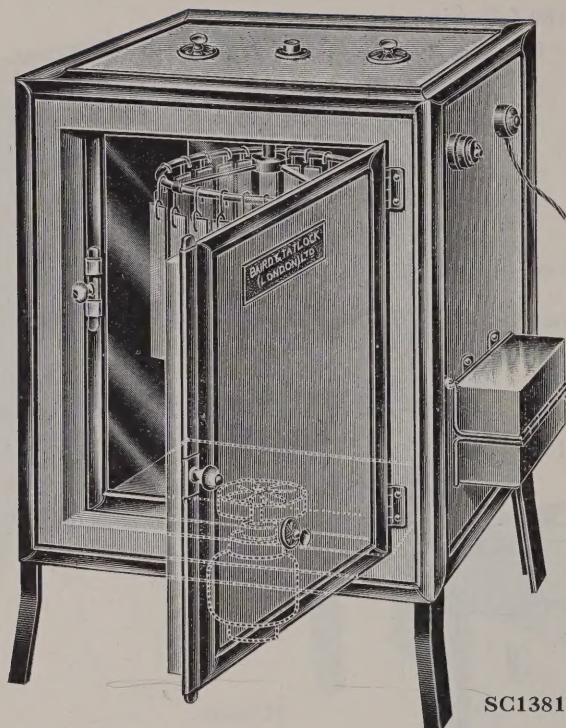
SC1380

FOR GAS HEATING

The construction is generally similar to the electrically heated model. Uniformity of temperature is secured by our specially designed air circulating system ; preheated air is drawn into the oven, and by a system of baffles the stream is diverted so as to cause an equal distribution of heat in all parts of the oven.

SC1380 B.T.L. Wide Range Gas Heated Ovens, as SC1375, but arranged for heating by gas. Complete with B.T.L. automatic wide range patent regulator giving a range of temperature between 25°-275° C.

A. Size 12 × 12 × 14 in. ....	....	....	....	....	....	d £24 10 0
B. „ 14 × 12 × 14 „ ....	....	....	....	....	....	d £26 10 0
C. „ 16 × 14 × 14 „ ....	....	....	....	....	....	d £31 5 0
D. „ 24 × 16 × 14 „ ....	....	....	....	....	....	d £37 0 0



SC1381

SC1381 Electrically Heated Oven for Ageing Rubber Samples, etc. (Geers Oven) Price £45 10 0

Fan ventilated Electric Drying Oven for temperatures from 25° to 275° C., for the rapid ageing or drying of samples of rubber or other materials.

The oven is made of heavy gauge copper sheet with an inner door of glass; it is fitted with a removable circular rack for holding the samples of material. The heaters are fitted in a space outside the copper oven and are graded so as to maintain an even temperature in all parts of the oven. The heating space is enclosed by a hard asbestos compound casing surrounded with 1 in. lagging, and the whole is contained in an outer casing consisting of a cellulose painted angle iron framework with enamelled asbestos painted panels.

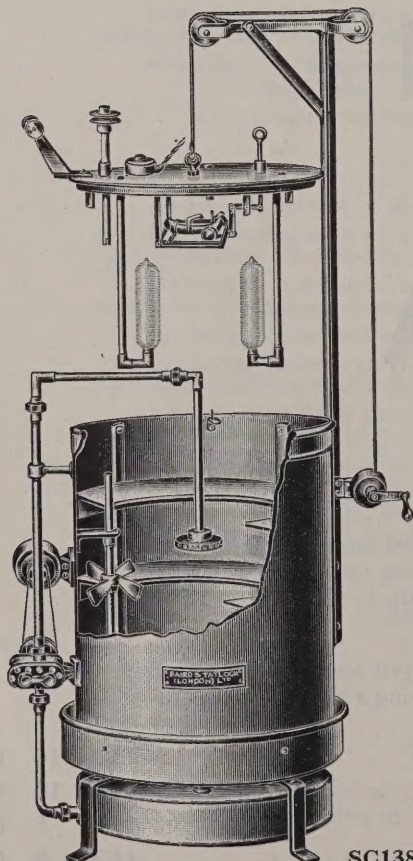
The oven is fitted with two sets of runners, so that two perforated shelves may be used as an alternative to the circular rack.

An electric fan is mounted in the bottom of the oven, and two adjustable ventilators are fitted in the top, together with a tubulure for a thermometer.

The graded electric heaters combined with the strong air current produced by the electric fan result in absolute even temperature being maintained in all parts of the oven. The temperature is controlled by a B.T.L. Bimetallic Regulator, which can be set to any desired temperature and will maintain the conditions within the oven with an accuracy $\pm \frac{1}{2}^{\circ}$.

The size of the interior of the oven is 18 in. x 18 in. x 18 in.

Electric heating elements are readily accessible for renewal if required, but the wire employed for these heaters is of such proportions that its melting point is more than double that attained when the oven is working at its highest temperature; in consequence, the life of these heaters is almost indefinite, and we have never yet been called upon to supply a renewal set.



SC1382

SC1382 Apparatus for Weathering Tests on Building or other Materials, including roofings, tar, tiles, etc. The apparatus gives an accelerated test by means of alternate periods of artificial rain, sunlight and heat.

The apparatus was devised at the Building Research Station, Garston, and consists of:

(1) A felt jacketed tank approximately 3 ft. high by 2 ft. 6 in. diameter, fitted with brackets or shelves for carrying specimens.

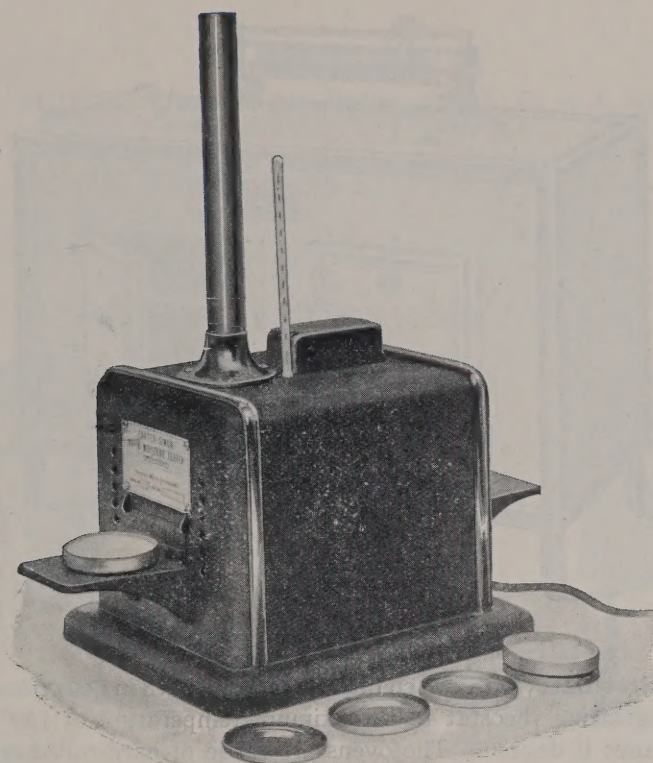
(2) A cover carrying quartz lamp, carbon filament lamps and air circulating device, to imitate the action of heat or sunlight. The cover and all its fittings are attached to a ratchet by means of a cord passing over pulleys, so that the complete unit can rapidly be raised clear of the specimen tank to allow the introduction of the fitting supplying the rain treatment.

(3) The rain treatment is provided by means of a spray jet produced by a small motor-driven pump, which in its turn is supplied with water from a receiver below the main tank. The motor also serves to drive the air circulator for the sunshine treatment.

The rain treatment jet is fitted on swivels and can rapidly be removed for replacement by the sunshine or heat treatment fittings.

Price complete with quartz lamp, two carbon filament lamps and thermometer f £68 0 0

Please state voltage when ordering.



SC1385

SC1385 The Carter-Simon Rapid Moisture Tester (Simon Patent) Price £20 0 0

The various types of moisture-testing ovens at present in use share the same serious disadvantages, namely, that they take too long to give results and that there is a variation in these results according to the position of the sample in the oven. Also most of the ovens on the market take a long time to reach working temperature, making it necessary to heat the oven for a considerable period before the test can be commenced, or, alternatively, the oven must be kept on continuously.

The Carter-Simon Rapid Moisture Tester successfully overcomes the disadvantages associated with previous moisture-testing ovens, absolutely reliable and uniform results being obtained in a fraction of the time previously required. With the Carter-Simon oven the actual time occupied in testing has been reduced to fifteen minutes or less, according to the type of product, as against the four hours or more taken by other appliances.

The Carter-Simon oven is electrically operated, working temperature being reached while the samples are being prepared and weighed.

In addition to rapid heating and the short testing period required, the oven is so designed that **every sample undergoes exactly the same treatment, thus avoiding error due to the samples occupying different positions in the oven.**

The oven is fitted with an automatic thermostatic control of special design. This thermostatic control automatically reduces the current passing through the oven to the minimum required to maintain a constant working temperature.

Three sample tins containing the samples are fed into the oven at one end, at definite intervals; as one tin is inserted through the special drop door, another is automatically ejected through the outlet door on to the platform at the opposite end.

The samples travel through in three stages, and therefore occupy, in turn, the three different positions in the oven; by this means each sample receives exactly the same treatment.

A special thermometer and twelve numbered testing tins are supplied with the oven, together with a length of flexible cable and a plug which can be connected to a lampholder.

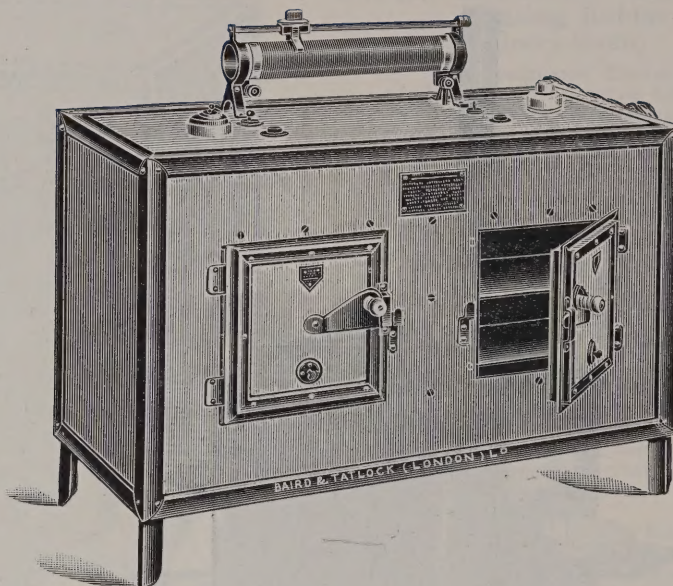
By the use of various combinations of temperatures and times, the oven can be employed for estimating moisture content in a large variety of products.

Data in reference to testing of any particular product will be furnished on request.

The oven is of all-metal construction and is very compact. The overall dimensions (exclusive of the chimney) are only 10½ in. by 9 in. by 9 in. The nett weight is 16 lbs.

The power consumption during the initial heating period is 270 watts, and 100 watts during actual operation.

The oven can be supplied for either 100–120 volts or for 200–240 volts, D.C. or A.C., single-phase. Ovens suitable for special voltage can also be supplied.

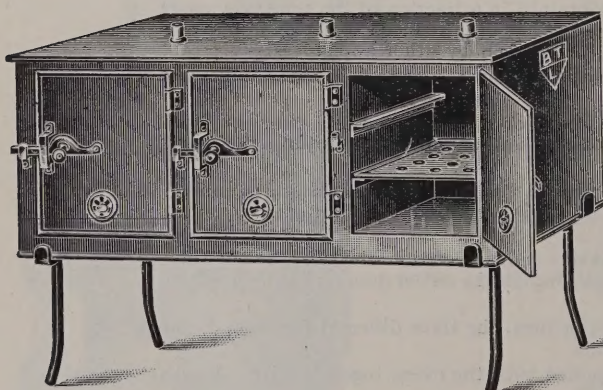


SC1386

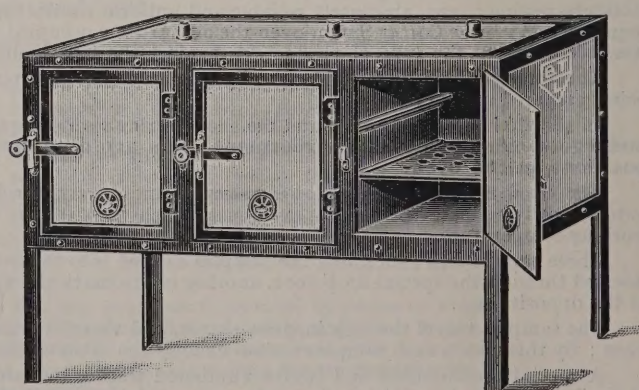
SC1386 Hot Air Oven or Sterilizer, with two chambers, each $8 \times 8 \times 8$ in., electrically heated and controlled by regulating rheostat to a maximum temperature of 150°C . Made for higher temperatures if desired. The ovens are made of hard-rolled copper, covered with asbestos and well lagged between the inner and outer walls. Two shelves are provided for each chamber d £29 0 0

Consumption in watts, 1700.

SC1387 Spare Heaters (18 in set) each d £0 6 0 ; per set d £5 5 0



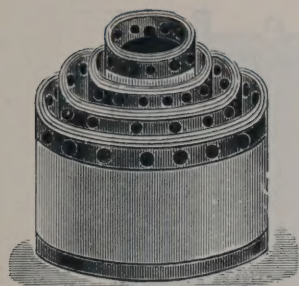
SC1388



SC1390

SC1388 Drying Oven, of hard copper, hot air, three compartments, each 9 in. high, 7 in. broad by $6\frac{1}{4}$ in. deep, with shelf and two sets runners in each, with extra plate riveted to bottom d £5 10 0

SC1390 Drying Oven, as above, but made of angle iron with hard asbestos compound sides, three chambers each $9 \times 7 \times 6\frac{1}{4}$ in., with one removable shelf d £4 17 6

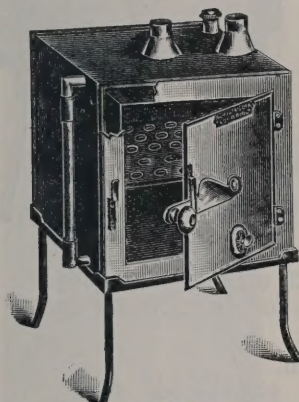


SC1392

SC1392 Asbestos Air Baths, round, set of 4, suitable for flasks of $\frac{1}{4}$ to 3 litres per set d £1 1 0

SC1394 Tripod, suitable for all sizes of air baths, as above d £0 5 0

HOT WATER DRYING OVENS.



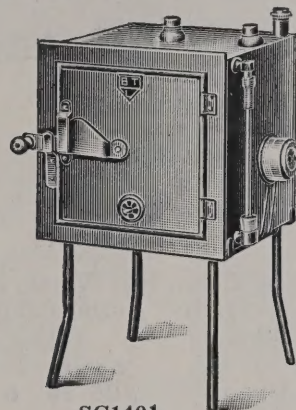
SC1400

Special Price :

SC1400

Size 10 x 10 x 10

d 55/-



SC1401

SC1400 Drying Oven, hot water, double jacketed, of hard copper, one sliding shelf on runners in centre, with gauge.

	A	B	C	D	E	F	G	H
Height, inside measurement	5	6	7	8	9	10	10	12 in.
Width, " "	5	6	7	8	9	10	12	14 "
Depth (back to front)	5	6	7	8	9	10	10	10 "
Price, with stand	b 42/-	b 45/-	b 47/6	b 50/-	b 60/-	b 55/-	b 90/-	b 105/-

SC1401 Drying Oven, copper as SC1400, but arranged for heating by electricity.

	A	B	C	D	E	F	G	H
Price, with stand	—	b 110/-	—	b 120/-	b 140/-	b 160/-	b 180/-	b 200/-
Consumption in watts	—	700	—	900	1000	1150	1300	1500

Any other size made to order.

SC1402 Spare Heaters :

	A	B	C	D	E	F	G	H
Number in set	—	1	—	1	1	2	2	2
Price, per set	—	b 15/6	—	b 17/-	b 21/6	b 31/-	b 31/-	b 31/-

Drying Oven, as above, but with bracket for fixing on wall and fitted with steam coil, and two unions for connecting up to main supply. (See SC1432.)

SC1403 Drying Oven, hot water, double jacketed, of stainless steel, one sliding shelf on runners in centre, with gauge.

Height, inside measurement	6	8	10 in.
Width, " "	6	8	10 "
Depth (back to front)	6	8	10 "
Price, with stand	c 90/-	c 135/-	c 180/-

SC1404 Drying Oven, as SC1403, but arranged for heating by electricity. Sizes as above.

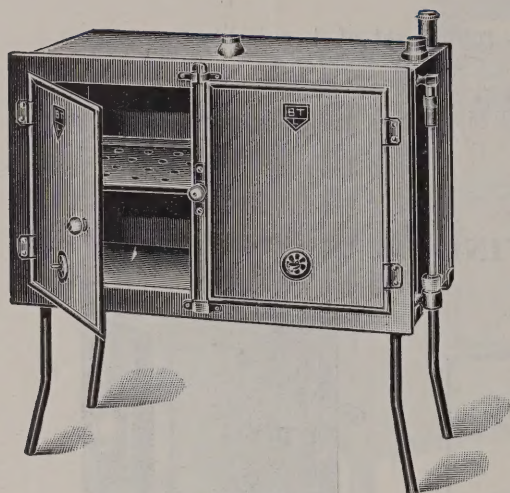
Price, with stand	c 162/-	c 200/-	c 265/-
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SC1405 Spare Heaters for above. Prices as SC1402. Sizes B, D and F.

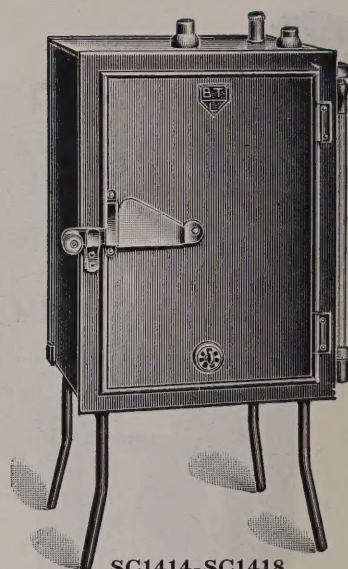
Any other size of stainless steel oven made to order

Please state voltage when ordering.

We specialize in making Water Ovens, with or without evaporating holes on top, for fitting to wall, and arranged for heating by either gas, oil, electricity or steam.



SC1406-SC1410



SC1414-SC1418

Drying Oven, Hot Water, oblong form, with one removable shelf, made of hard-rolled copper, heavy gauge, and fitted with water-level tube, tubulures for thermometer and filling.

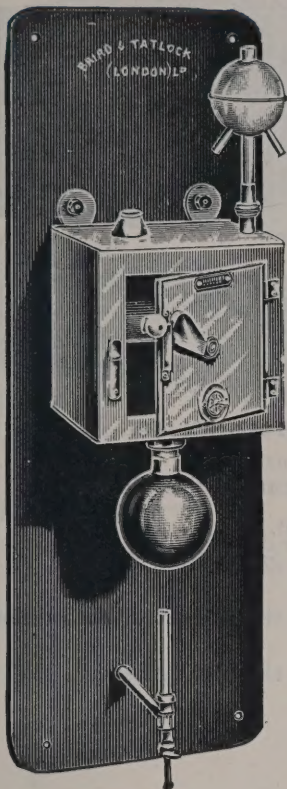
	Size	....	8 × 16 × 8	10 × 18 × 8	10 × 20 × 8 in.	
SC1406	Price	....	b £5 10 6	b £6 0 0	b £6 10 0	gas heated
SC1408	Price	....	b £7 5 0	b £8 0 0	b £8 17 6	heated by means of steam coil, with two unions and bracket for fixing to wall as SC1432.
SC1410	Price	....	b £9 0 0	b £9 15 0	b £10 15 0	electrically heated.
	Consumption in watts		1200	1400	1600	
SC1412	Spare Heaters for					
	above (2 in set)		b 31/-	b 31/-	b 34/-	per set.

Drying Oven, hot water, double jacketed, tall form, with three movable shelves.

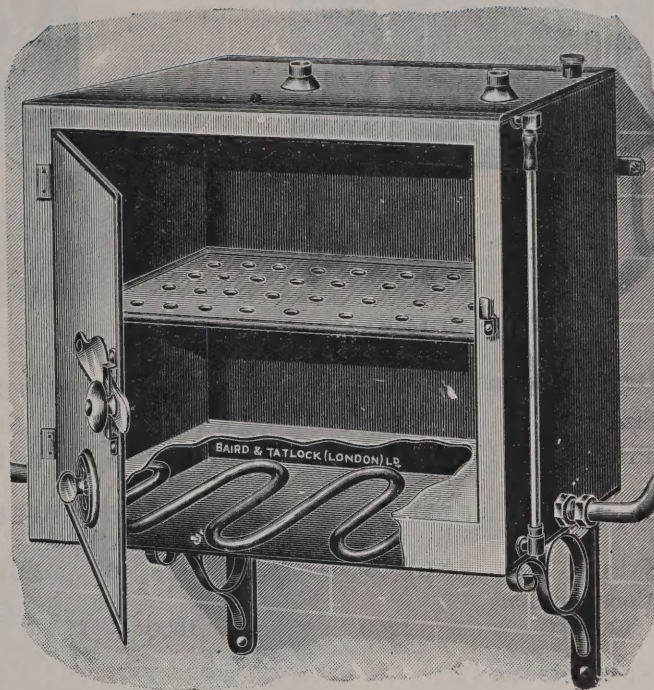
	Size	....	16 × 10 × 9	18 × 12 × 10	20 × 12 × 10 in.	
SC1414	Price	....	b £7 10 0	b £8 0 0	b £8 10 0	gas heated.
SC1416	Price	....	b £9 5 0	b £10 0 0	b £10 12 6	steam heated, with unions for connecting up and brackets for fixing to wall as SC1432.
SC1418	Price	....	b £11 0 0	b £11 15 0	b £12 10 0	electrically heated.
	Consumption in watts		1400	1600	1800	
SC1420	Spare Heaters for					
	above (2 in set)		b 31/-	b 31/-	b 33/-	per set.

Drying Oven, Hot Water, two Chambers, each fitted with one removable shelf, on iron stand, and with all-copper doors.

	Size	....	8 × 8 × 8	8 × 10 × 10	10 × 12 × 10 in. each chamber.	
SC1422	Price	....	b £9 0 0	b £9 12 6	b £10 5 0	gas heated.
SC1424	Price	....	b £10 17 6	b £11 12 6	b £12 7 6	steam heated, with unions, etc.
SC1426	Price	....	b £12 10 0	b £12 5 0	b £14 5 0	electrically heated.
	Consumption in watts		1200	1600	2000	
SC1428	Spare Heaters for					
	above (2 in set)		b 31/-	b 31/-	b 40/-	per set.



SC1430



SC1432

SC1430 Drying Oven, hot water, copper, with Soxhlet's condenser and brazed copper flasks from 500 ml. capacity, connected by unions, and bath fixed to iron plate for hanging on wall, with Bunsen burner with stopcock.

Oven, size inside	....	....	6 × 6 × 6	8 × 8 × 8	12 × 10 × 10 in.
Price	....	....	each £5 0 0	£5 10 0	£7 10 0

SC1432 Drying Oven, hot water, of hard-rolled copper, double jacketed, one sliding shelf on runners in centre, fitted with steam coil, with unions left ready for connecting to supply, with iron brackets.

Inside sizes of oven :

Height	....	6	7	8	9 in.
Width	....	6	7	8	9 "
Depth (back to front)	....	6	7	8	9 "
Price	£3 19 0	£4 16 0	£5 8 0	£6 7 0	
Height	....	10	10	12 in.	
Width	....	10	12	14 "	
Depth (back to front)	....	10	10	10 "	
Price	£7 16 0	£9 5 0	£10 10 0		

SC1434 Drying Oven, as above, but arranged for heating by means of gas, complete with gas burners, ready for connecting to main supply, with brackets for fixing to wall.

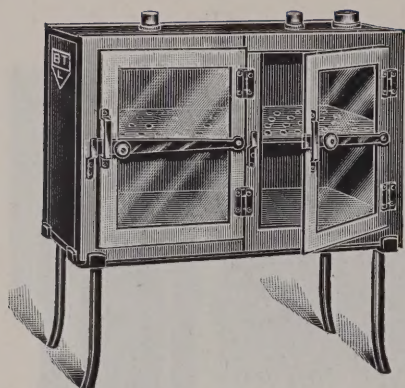
Size	6 × 6 × 6	7 × 7 × 7	8 × 8 × 8	9 × 9 × 9	10 × 10 × 10	10 × 12 × 10	12 × 14 × 10 in.
Price	£3 5 0	£3 10 0	£3 17 6	£4 10 0	£5 0 0	£5 15 0	£7 5 0

SC1435 Drying Oven, as above, but arranged for heating by electricity.

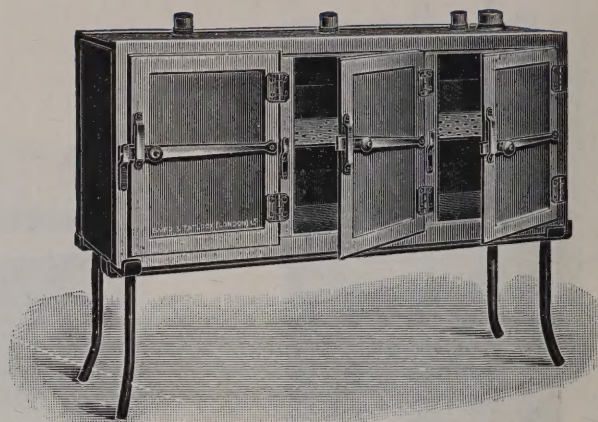
Size	....	7 × 7 × 7	8 × 8 × 8	9 × 9 × 9	10 × 10 × 10	12 × 14 × 10 in.
Price	....	£5 15 0	£6 0 0	£7 5 0	£8 5 0	£10 10 0
Wattage	....	800	900	1000	1150	1500

SC1436 Spare Heaters for above :

No. in set	1	1	1	2	2
Price per set	£16/-	£17/-	£21/6	£31/-	£31/-



SC1438-SC1440



SC1442-SC1444

Drying Ovens, as above, two Chambers, but with gun-metal framed glass doors.

	Size	8 × 8 × 8	8 × 10 × 10	10 × 12 × 10 in.	
SC1438	Price	b £10 0 0	b £10 12 6	b £11 5 0	gas heated.
SC1439	Price	b £11 7 6	b £13 2 6	b £13 17 6	steam heated, with unions, etc.
SC1440	Price	b £13 10 0	b £14 5 0	b £15 5 0	electrically heated.
	Consumption in watts	1200	1600	2000	

SC1441 **Spare Heaters** for
above (2 in set) b 31/- b 33/- b 40/- per set.

Drying Ovens, as SC1422-SC1426, but with three chambers, each chamber fitted with one movable shelf, on iron stand, and with all-copper doors.

	Size	8 × 8 × 8	8 × 10 × 10	10 × 12 × 10 in.	each chamber.
SC1442	Price	b £13 0 0	b £13 15 0	b £14 10 0	gas heated.
SC1443	Price	b £15 0 0	b £15 15 0	b £17 5 0	steam heated, with two unions and brackets for fixing to wall.
SC1444	Price	b £18 10 0	b £19 5 0	b £20 0 0	electrically heated.
	Consumption in watts	2000	2500	3000	

SC1445 **Spare Heaters** for
above (3 in set) b 46/6 b 49/6 b 60/- per set.

Drying Ovens, as above, but with gun-metal framed glass doors.

	Size	8 × 8 × 8	8 × 10 × 10	10 × 12 × 10 in.	
SC1446	Price	b £14 10 0	b £15 5 0	b £16 0 0	gas heated.
SC1448	Price	b £16 10 0	b £17 5 0	b £18 15 0	steam heated, with two unions and bracket for fixing to wall.
SC1450	Price	b £20 0 0	b £20 15 0	b £21 10 0	electrically heated.
	Consumption in watts	2000	2500	3000	

SC1452 **Spare Heaters** for
above (3 in set) b 42/- b 45/- b 54/- per set.

SC1460 Drying Oven, as Fig. SC1442 gas heated, with three chambers, of **stout copper**, all joints brazed, for drying if required at temperatures higher than that of boiling water, by the use of oil, glycerine, etc., according to temperature required. These ovens are much more durable than the ordinary pattern with soldered joints, and for constant use as ordinary drying ovens will be found more economical as there is no possibility of the joints leaking. The ovens are fitted with **stout gun-metal framed copper doors** to each chamber, also movable shelf fitted in centre of each chamber.

Inside sizes of

chambers	8 × 8 × 8	10 × 10 × 8	10 × 12 × 10 in.
Price	 d £23 0 0	d £27 0 0	d £30 10 0

SC1462 Drying Oven, as above, but heated by electricity.

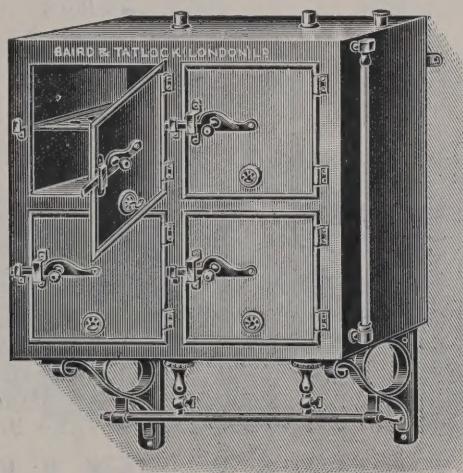
Price	 d £29 0 0	d £33 0 0	d £36 10 0
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Consumption

in watts	2000	2500	3000
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SC1464 Spare Heaters for

above (3 in set)	d 46/6	d 49/6	d 60/- per set.
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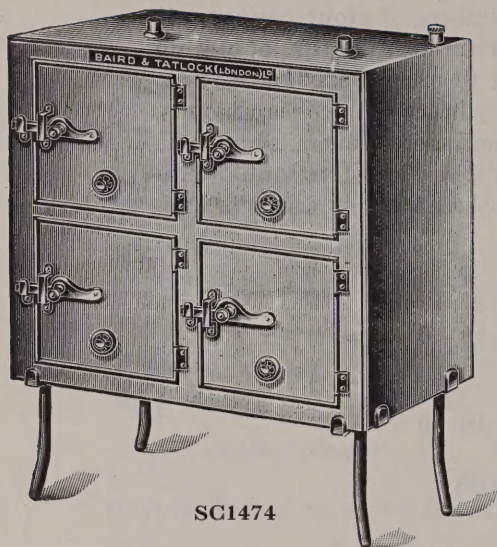
SC1466

Drying Ovens, wall pattern, of stout hard-rolled copper, double lapped joints, with four chambers, each fitted with one removable shelf and tubulures at top for filling and for the thermometer. Complete with water-level tube. The price of the gas-heated oven includes gas burners.

	Size of chamber	....	8 × 8 × 8	....	9 × 9 × 9	....	10 × 10 × 10	....	10 × 12 × 10 in.
SC1466	Price, gas heated	....	d £14 15 0	....	d £16 0 0	....	d £16 10 0	....	d £19 0 0
SC1468	„ steam heated, with coil and two unions	....	d £15 10 0	....	d £16 17 6	....	d £17 0 0	....	d £20 5 0
SC1470	„ electrically heated	....	d £17 10 0	....	d £18 15 0	....	d £19 0 0	....	d £22 10 0
	Consumption in watts		2000		2300		2700		3000

SC1472 Spare Heaters for above

(2 in each set)		d 40/-		d 44/-		d 48/-		d 57/- per set.
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SC1474

Drying Ovens, with four chambers, each chamber fitted with one movable shelf, on iron stand, and with all-copper doors.

SC1474	Gas heated.			
	Size each chamber	8 × 8 × 8	8 × 10 × 10	10 × 12 × 10 in.
	Price	£13 0 0	£14 0 0	£17 0 0

SC1475	Electrically heated.			
	Size each chamber	8 × 8 × 8	8 × 10 × 10	10 × 12 × 10 in.
	Price	£16 10 0	£17 15 0	£21 10 0
	Consumption in watts	2000	2500	3000

SC1476	Spare Heaters for above.			
	Number in set	2	3	3
	Price	£40/-	£49/6	£60/- per set.

Drying Ovens, sizes and description as above, but with gun-metal framed glass doors.

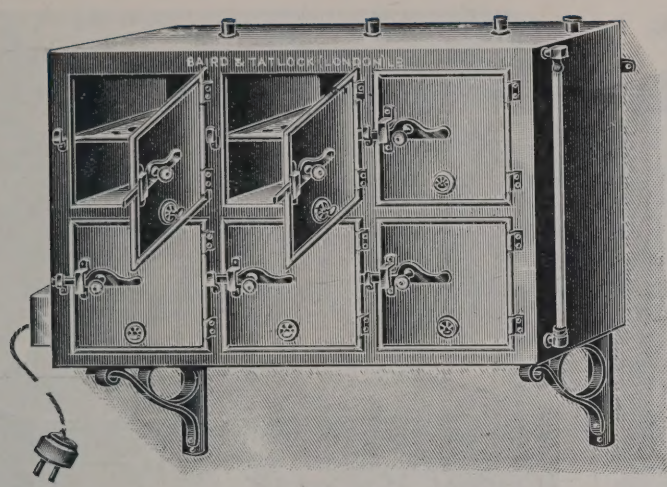
	Size each chamber	8 × 8 × 8	8 × 10 × 10	10 × 12 × 10 in.
SC1479	Gas heated. Price	£17 0 0	£18 10 0	£20 0 0
SC1480	Electrically heated. Price	£20 10 0	£22 5 0	£25 10 0
	Consumption in watts	2000	2500	3000
SC1481	Spare Heaters for above.			
	Number in set	2	3	3
	Price	£40/-	£49/6	£60/- per set.

Drying Oven, with four small chambers and one large chamber, each fitted with one removable shelf, on iron stand, and with all-copper doors.

	4 chambers each 8 × 8 × 8 and 1 chamber 16 × 8 × 8	4 chambers each 8 × 10 × 10 and 1 chamber 16 × 10 × 10	4 chambers each 8 × 12 × 10 in. and 1 chamber 16 × 12 × 10 in.	
SC1484	Price	£18 0 0	£19 0 0	£20 0 0 gas heated.
SC1485	Price	£20 0 0	£21 0 0	£22 0 0 steam heated, with coil and unions, and brackets for fixing to wall.
SC1486	Price	£22 10 0	£23 15 0	£25 0 0 electrically heated.
	Consumption in watts	3000	4000	5000
SC1487	Spare Heaters for above (2 in set)	£45/-	£58/-	£70/- per set.

Drying Oven, sizes and description as above, but with gun-metal framed glass doors.

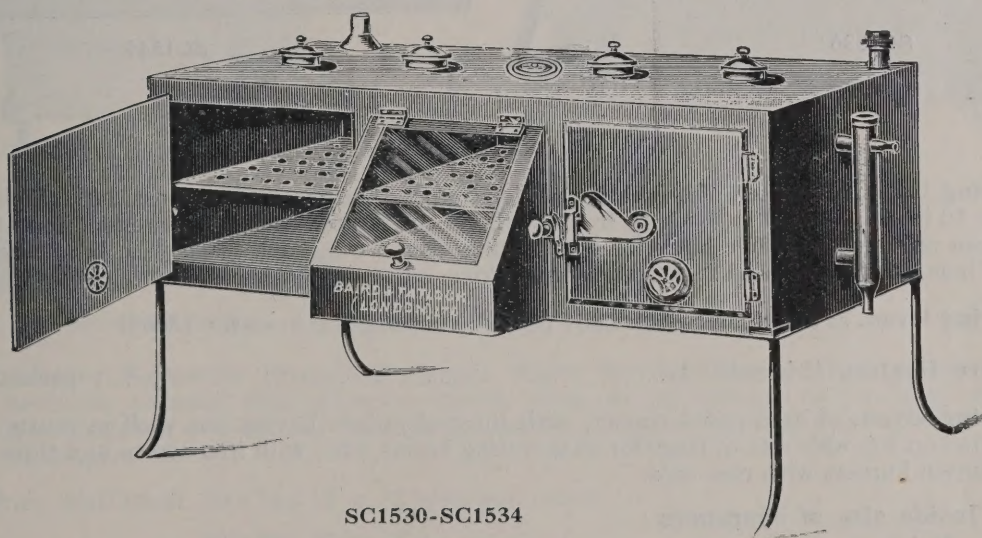
SC1490	Price	£21 0 0	£22 0 0	£23 0 0 gas heated.
SC1491	Price	£23 0 0	£24 0 0	£25 0 0 steam heated.
SC1492	Price	£25 10 0	£26 15 0	£28 0 0 electrically heated.
	Consumption in watts	3000	4000	5000
SC1493	Spare Heaters for above (2 in set)	£45/-	£58/-	£70/- per set.



Drying Ovens, wall pattern, of stout hard-rolled copper, double lapped joints, with six chambers, each fitted with one removable shelf and tubulures at top for filling and for thermometers. Complete with water-level tube. The price of the gas-heated oven includes gas burners.

SC1526

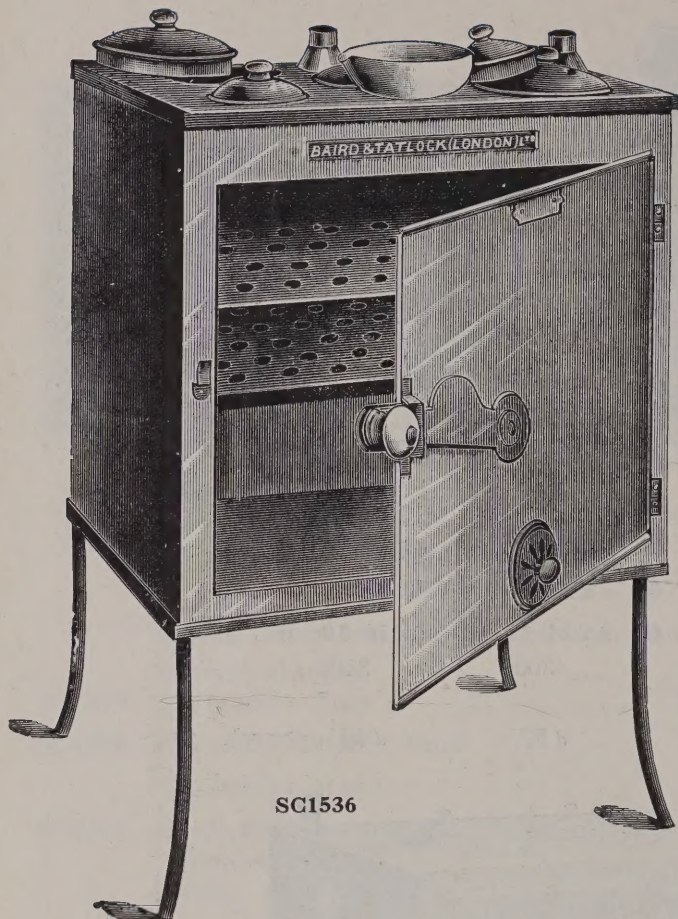
	Size of chamber	8 × 8 × 8	9 × 9 × 9	10 × 10 × 10 in.
SC1522	Price, gas heated	£18 5 0	£21 0 0	£22 10 0
SC1524	„ steam heated	£20 15 0	£22 10 0	£24 5 0
SC1526	„ electrically heated	£22 15 0	£24 15 0	£26 10 0
	Consumption in watts	2500	3000	3500
SC1528	Spare Heaters for above (2 in each set)	48/-	57/-	64/- per set.



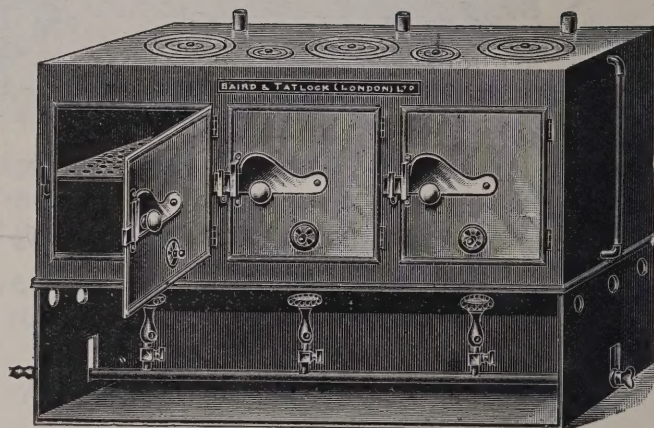
SC1530-SC1534

SC1530	Drying Oven, for hot water, of bright hard-rolled copper, with three chambers 8 × 8 × 8 in. inside. The central one is fitted with a sloping glazed door hinged at top ; on top of oven are five holes for evaporating dishes, etc. Sizes of holes, 1½, 2, 3, 4, and 5 in., four fitted with covers, and the 5-in. hole with a set of copper rings, constant level arrangement fitted at side of oven, on stout iron stand 8 in. high				£13 13 0
SC1532	Drying Oven, as above, but arranged for heating by electricity (consumption in watts, 2000)				£18 18 0
SC1534	Spare Heaters for above (3 in set)				£2 5 0 per set

Please state voltage when ordering.



SC1536



SC1544

- SC1536 Drying Oven**, hot water, of bright hard-rolled copper ; inside measurements, 14 in. high by 12 in. wide by 10 in. back to front, with two perforated shelves on runners, top of oven provided with five holes for evaporating dishes, etc., each fitted with lid. Size of holes, 5, 4½, 4, 3, and 2½ in. diameter. Price, on stout iron stand d £8 8 0
- SC1538 Drying Oven**, as above, but electrically heated (consumption in watts, 1500) d £10 17 6
- SC1539 Spare Heaters** (2 in set) per set d £1 9 0
- SC1544 Drying Oven**, of hard-rolled copper, with three chambers having one shelf in centre, fitted on top with sets of rings for evaporating basins, etc., with iron screen and three Bunsen burners with rose tops.

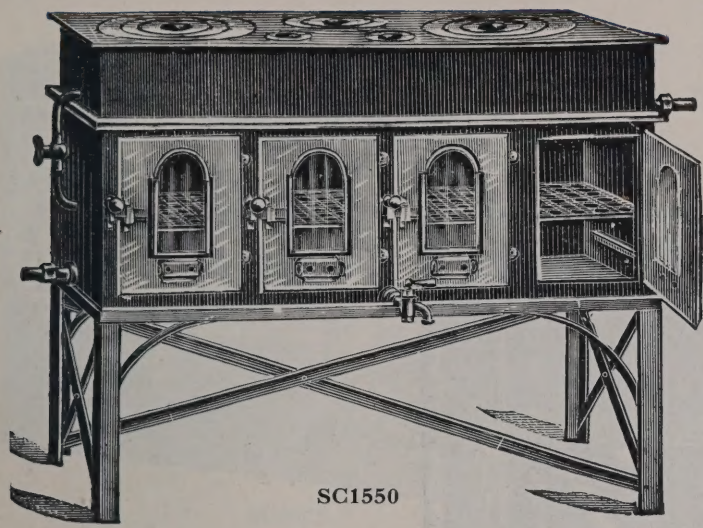
Inside size of chambers :

Height	....	6	7	8	9 in.
Width	....	6	7	8	9 "
Depth (back to front)	....	6	7	8	9 "
Price	....	d £10 0 0	d £12 0 0	d £14 0 0	d £16 0 0

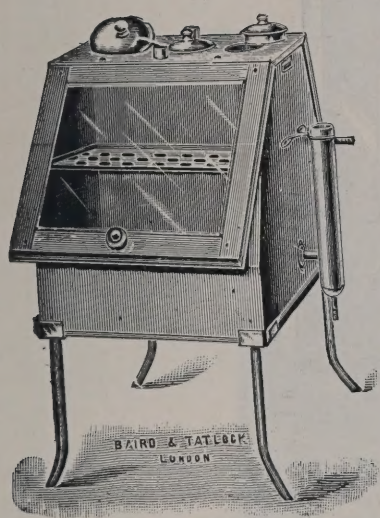
- SC1545 Drying Oven**, as above, but arranged for heating by electricity.
- | | | | | | |
|----------------------|------|------------|------------|------------|-----------|
| Price | .... | d £14 10 0 | d £16 15 0 | d £18 10 0 | d £21 0 0 |
| Consumption in watts | 1200 | 1600 | 2000 | 2400 | |

- SC1546 Spare Heaters for above**
(3 in each set) d 36/- d 40/6 d 45/- d 49/6 per set.

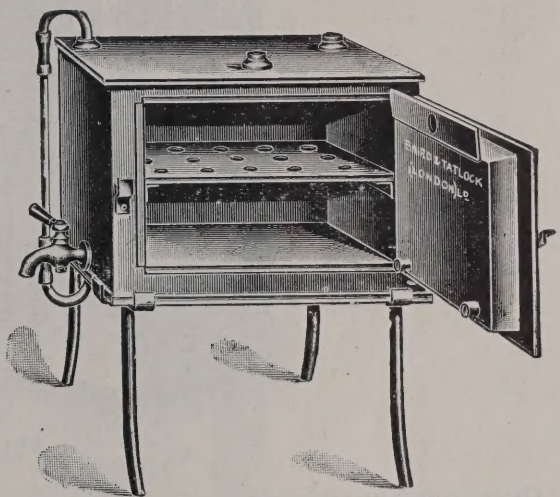
Please state voltage when ordering.



SC1550 **Drying Oven**, steam, of copper, with upper water bath, on iron stand. The lower part consists of four ovens, each 10 × 8 × 8 in., with brass doors and glass plate in each, one perforated shelf adjustable in two positions in each oven. The upper part is fitted with two sets of rings and lid of 8½ in., two sets of 6 in., and one set of 4 in. diameter. Stopcock to regulate steam on left hand and tap to draw off condensed water in front. Total measurement outside, 39½ in. long, 9¾ in. deep, 19 in. high without stand, 30 in. high with stand d £25 0 0



SC1554-SC1556

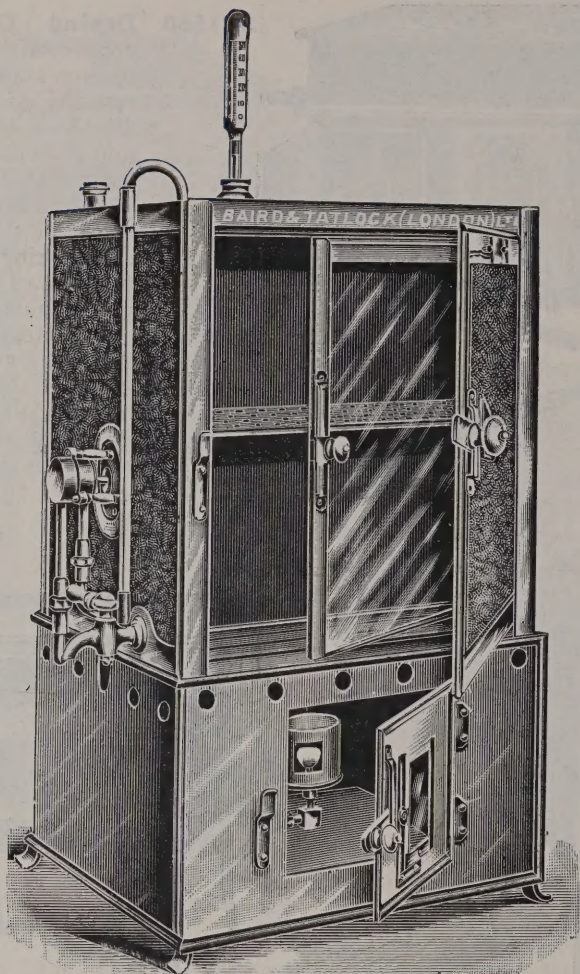


SC1559

Professor Reynolds' Improved Copper Water Drying Oven, with glass door on each side, constant level apparatus at end, three circular openings on top, 2, 2½, and 3 in. diameter, with covers. Sides of bath fitted with water jacket to ensure uniformity of temperature.

SC1554	Price, with stand, 10 × 14 × 12 in., 3 holes and covers	....	....	....	....	d £7 0 0
SC1555	„ „ 12 × 16 × 14 in., 3 „ „	....	....	....	....	d £8 10 0
SC1556	„ „ 16 × 18 × 14 in., 4 „ „ two 3 in. diameter	....	....	....	....	d £11 10 0
SC1559	Drying Oven , of hard-rolled copper, for hot water. Inside size : height 9 in., depth (front to back) 8 in., width 11½ in. ; gauge glass, stopcock, and double door with tube. The double door is for calcium chloride, through which the air passes before entering the chamber. With stand					 d £7 10 0
SC1560	Drying Oven , as above, but arranged for heating by electricity (consumption in watts, 1100)					 d £10 10 0
SC1561	Spare Heater for above					 d £1 2 6

Please state voltage when ordering.



SC1564

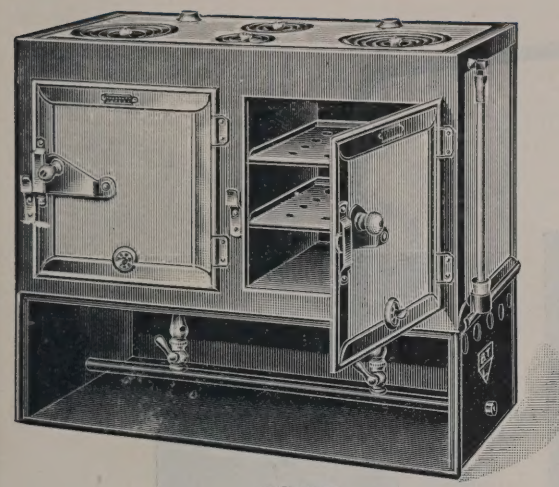
SC1564 Oven, constant temperature, for working at tropical heat 30°C . ; heated by gas ; made of stout copper, double jacketed, felt covered, with double doors (inner of glass) and regulated by our registered automatic gas capsule regulator. Complete with thermometer and gas burner.

Size	.....	A	B	C
Inside height	.....	12	16	20 in.
„ width	.....	10	14	16 „
„ depth	.....	10	14	16 „
Price	.....	d £11 11 0	d £13 15 0	d £18 18 0

SC1566 Oven, as above, but electrically heated.

Size	.....	A	B	C
Inside height	.....	12	16	20 in.
„ width	.....	10	14	16 „
„ depth	.....	10	14	16 „
Price	.....	d £13 15 0	d £15 17 0	d £21 0 0
Consumption in watts	.....	250	300	350

SC1568 Spare Heaters for above d £1 1 0 d £1 1 0 d £1 1 0

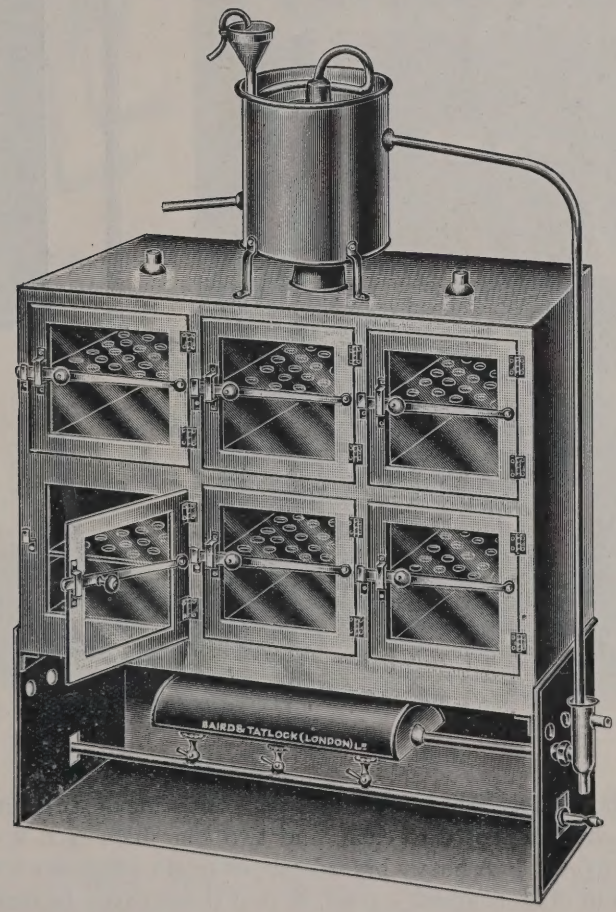


SC1570

Drying Oven, of hard-rolled copper, with two chambers 10 × 10 × 10 in. each, with two shelves and fitted on top with four sets of rings (2–5 in. diam., 1–3 in. diam., 1–2½ in. diam.). Mounted on screen which carries two rose-topped burners.

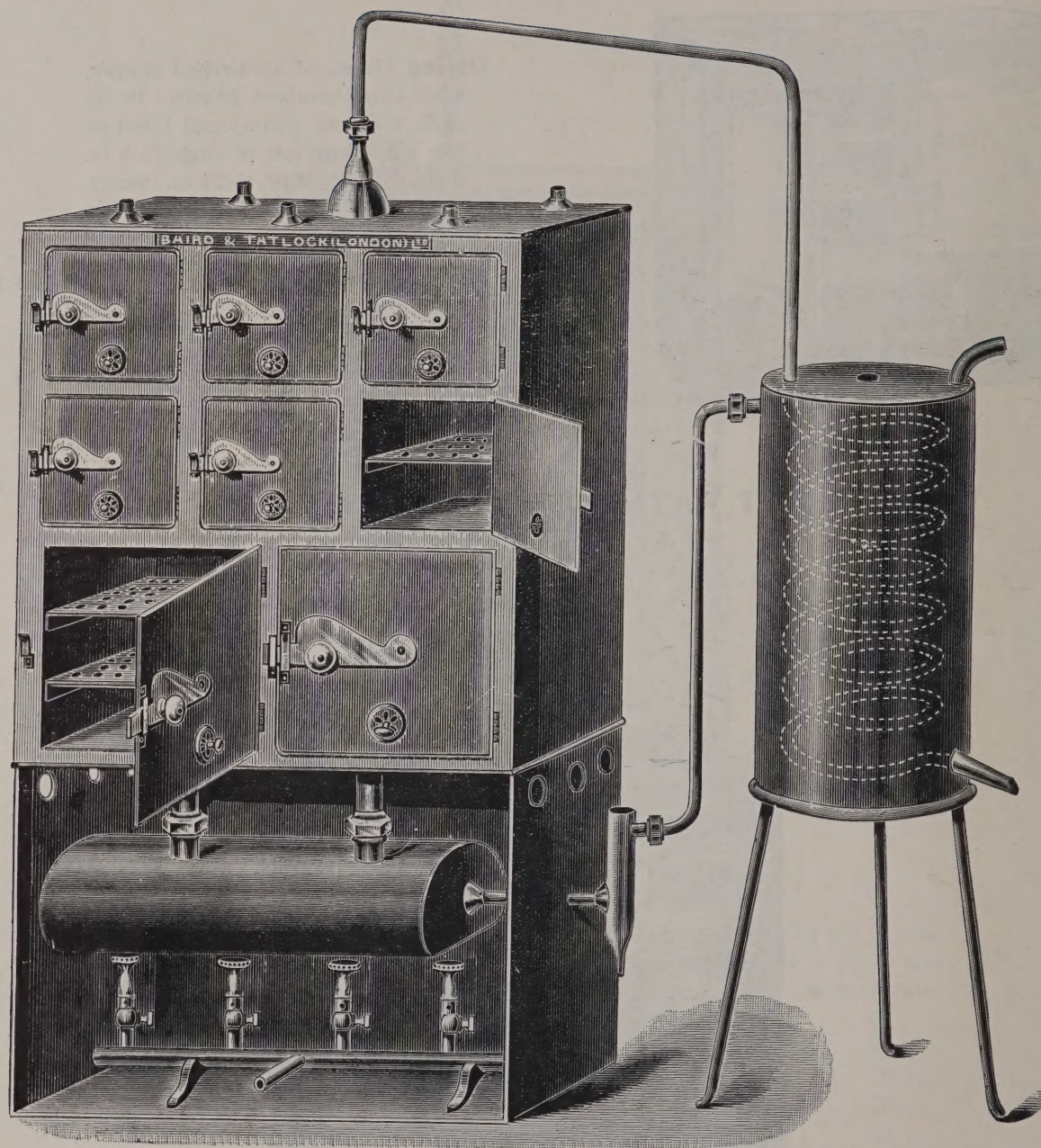
- | | | | | |
|--------|-------------------------------------|------|-----------|-----------------|
| SC1570 | Oven in copper | .... | .... | .... d £10 10 0 |
| SC1572 | Oven in copper, asbestos covered | .... | d £11 5 0 | |
| SC1574 | Oven in copper, electrically heated | .... | d £14 5 0 | |

HOT WATER OVENS WITH STILLS.



SC1580

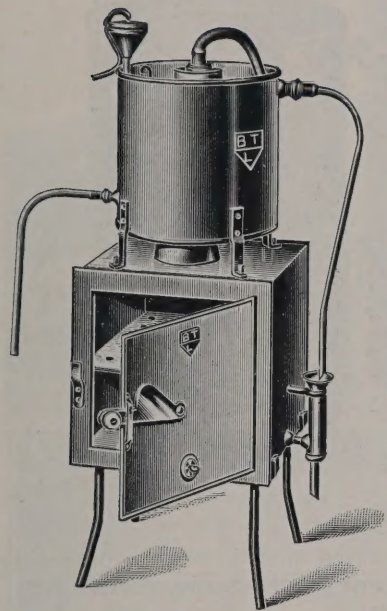
- | | | | | | | | | | | |
|--------|--|------|------|------|------|------|------|------|------|-----------------|
| SC1580 | Drying Oven, of hard-rolled copper, six chamber pattern, each chamber 8 × 8 × 8 in., in two rows, with glass doors hinged and fitted with gun-metal frames, brazed copper generator connected to oven by gun-metal unions and constant level arrangement, shelf in centre of each compartment. Complete with screen, burners, and condenser on top | | | | | | | | | d £27 10 0 |
|--------|--|------|------|------|------|------|------|------|------|-----------------|



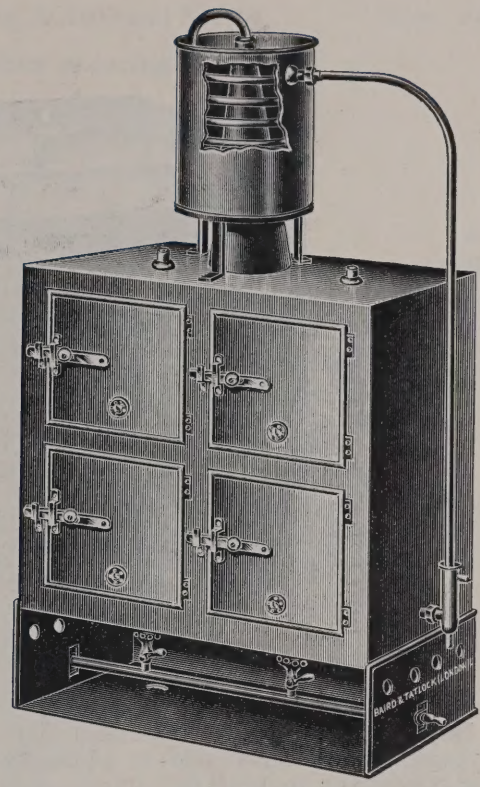
SC1582

SC1582 Drying Oven, for hot water, of hard-rolled copper, consisting of six chambers $6 \times 6 \times 7$ in. inside, with one shelf in centre to each, and two chambers each $9 \times 9 \times 8$ in. inside, with two shelves to each. A heavy brazed copper steam generator is connected to the bottom by means of brass coupling screws, so that it can easily be removed if required. A constant level in same is maintained by means of a connection from top of condenser. The bath is mounted on heavy sheet-iron stand with brackets for fastening to wall. The pure tin worm is contained in a copper condensing bucket.

Price, complete with set of rose-top Bunsen burners, as illustrated at £33 0 0



SC1584A



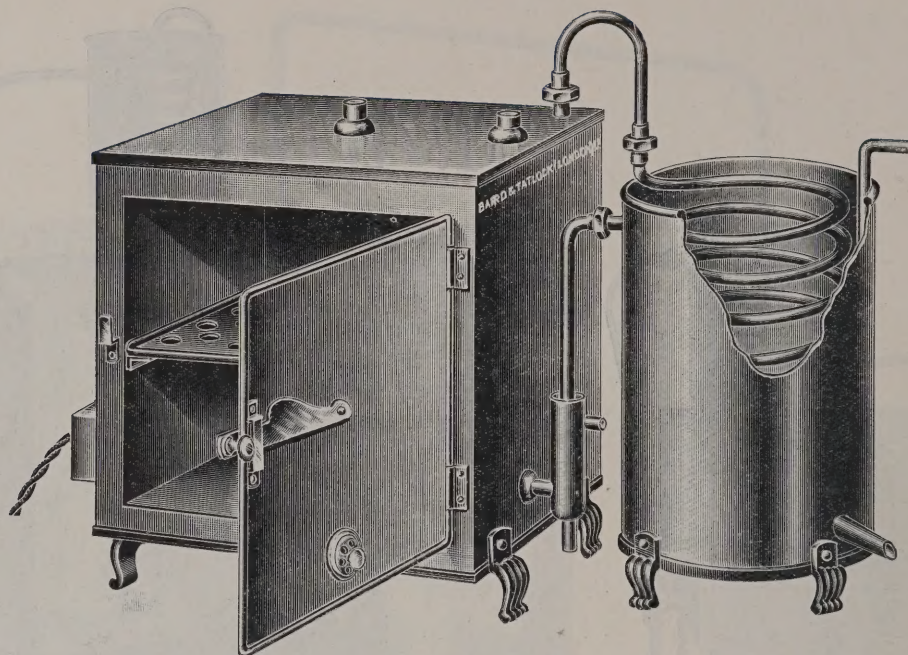
SC1584C

Special Combined Still-Oven, with air space between oven and condenser, thus ensuring the greatest possible cooling and avoidance of all possible convection of heat. This pattern condenser can be fitted to any make or size of oven.

OVEN-STILLS COMBINED.

	With one chamber, A.			With two chambers, B.			With four chambers, C.		
Size in.	8 x 8 x 8	10 x 10 x 10	12 x 10 x 10	8 x 8 x 8	10 x 10 x 10	12 x 10 x 10	8 x 8 x 8	10 x 10 x 10	12 x 10 x 10
SC1584 Gas heated	d £6 10 0	d £7 5 0	d £8 10 0	d £13 0 0	d £14 5 0	d £14 15 0	d £18 0 0	d £19 10 0	d £22 0 0
SC1586 Steam heated Price includes steam coil.	d £7 0 0	d £7 17 6	d £9 10 0	d £13 10 0	d £14 17 6	d £15 15 0	d £18 10 0	d £20 5 0	d £23 5 0
SC1588 Electrically heated Consumption in watts	d £9 10 0 1200	d £10 10 0 1600	d £12 10 0 2000	d £16 0 0 1800	d £17 10 0 2400	d £18 15 0 3000	d £22 0 0 2500	d £24 0 0 3000	d £27 10 0 3500
SC1590 Spare Heaters : Number in set Price each ,, per set	2 d £0 15 0 d £1 9 6	2 d £0 16 6 d £1 12 0	2 d £1 0 0 d £1 18 6	2 d £0 16 6 d £1 12 0	2 d £1 0 6 d £1 19 0	3 d £1 0 6 d £2 19 0	2 d £1 0 6 d £1 19 0	3 d £1 0 0 d £2 17 6	4 d £0 16 6 d £3 4 0
SC1592 Oil heated Price includes Primus oil burner	d £7 5 0	d £8 0 0	d £9 5 0	d £13 15 0	d £15 7 0	d £15 17 0	d £19 2 0	d £21 0 0	d £24 4 0

For Stills and Condensers alone, see No. SC3250 *et seq.*



SC1600

SC1596 Drying Oven, of bright hard-rolled copper, with perforated shelf in centre, pure tin worm condenser at side, in copper bucket, and constant level arrangement from condenser to bath, on stands, suitable for gas heating.

Height	....	8	9	10	10	12 in.	} Inside sizes of oven.
Width	....	8	9	10	12	14 „	
Depth (back to front)	8	9	10	10	10	10 „	
Prices....		d £5 0 0	d £5 10 0	d £6 10 0	d £7 10 0	d £8 10 0	

SC1598 Drying Oven, as above, with condenser at side and stands, oven covered with asbestos.

Height	....	8	9	10	10	12 in.	} Inside sizes of oven.
Width	....	8	9	10	12	14 „	
Depth (back to front)	8	9	10	10	10	10 „	
Prices....		d £6 10 0	d £7 0 0	d £8 0 0	d £9 15 0	d £11 0 0	

SC1600 Drying Oven, as SC1596, but arranged for heating by electricity.

Height	....	8	9	10	12	12 in.	} Inside sizes of oven.
Width	....	8	9	10	12	14 „	
Depth (back to front)	8	9	10	10	10	10 „	
Consumption in watts	....	1200	1400	1600	2000	2400	
Prices....		d £8 0 0	d £9 0 0	d £10 5 0	d £11 5 0	d £12 10 0	

SC1602 Spare Heaters for above

(2 in set)		d 30/-	d 30/-	d 33/-	d 40/-	d 41/- per set.
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SC1604 Drying Oven, asbestos covered, as SC1598, but arranged for heating by electricity.

Height	....	8	9	10	10	12 in.	} Inside sizes of oven.
Width	....	8	9	10	12	14 „	
Depth (back to front)	8	9	10	10	10	10 „	
Consumption in watts	....	1000	1200	1400	1800	2000	
Prices....		d £9 10 0	d £10 10 0	d £11 15 0	d £13 0 0	d £14 10 0	

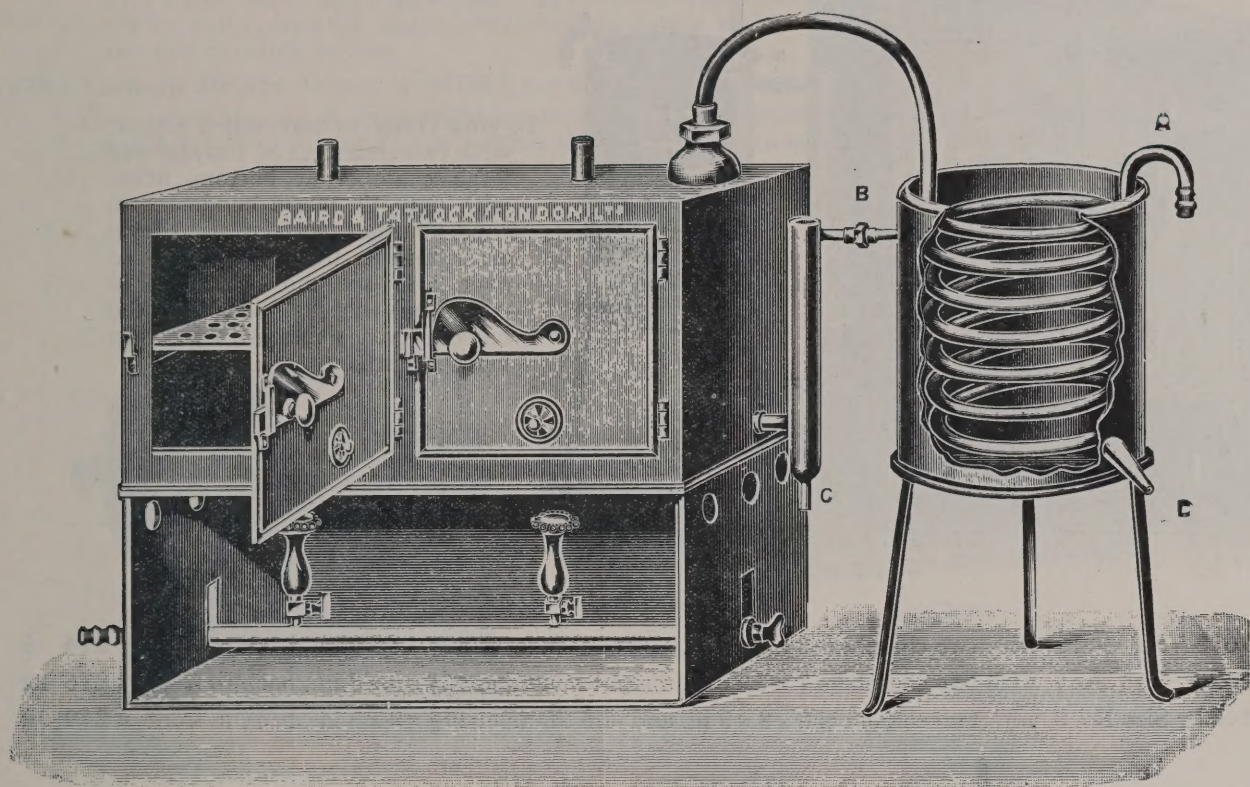
SC1606 Spare Heaters for above

(2 in set)		d 30/-	d 30/-	d 33/-	d 40/-	d 41/- each.
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SC1608 Rheostat, for regulating temperature of ovens, Nos. SC1600 and SC1604

Price d £2 12 6

Please state voltage when ordering.



SC1610

SC1610 Drying Oven, of hard-rolled copper, with two compartments, each fitted with shelf in centre, and mounted on sheet-iron screen with rose-top Bunsen burners, pure tin worm condenser in copper bucket connected to oven by coupling screw, with constant level arrangement from condenser to oven.

Inside sizes of chambers :

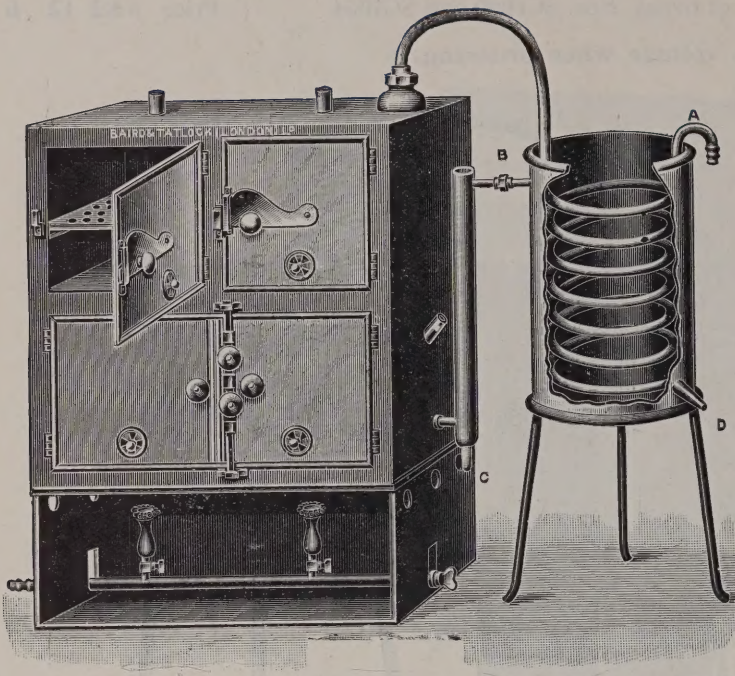
Height	 6	7	8 in.
Width	 6	7	8 „
Depth (back to front)	6	7	8 „
Price	d £9 10 0	d £10 10 0	d £12 10 0

SC1612 Drying Oven, as above, but arranged for heating by electricity.

Price	d £11 15 0	d £13 5 0	d £16 10 0
Consumption in watts	 1400	1600	1800

SC1614 Spare Heaters for above

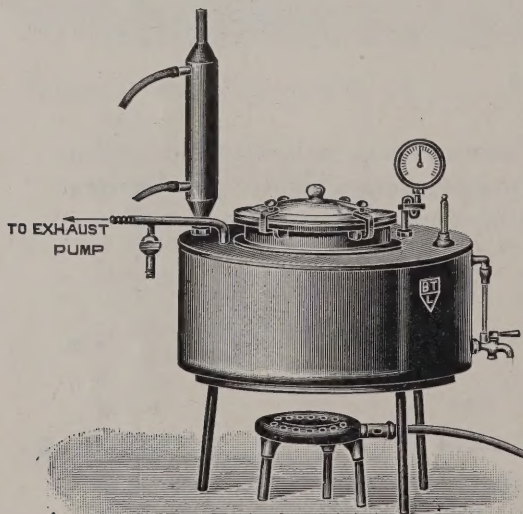
(2 in set)	 d 15/-	d 15/-	d 16/6 each.
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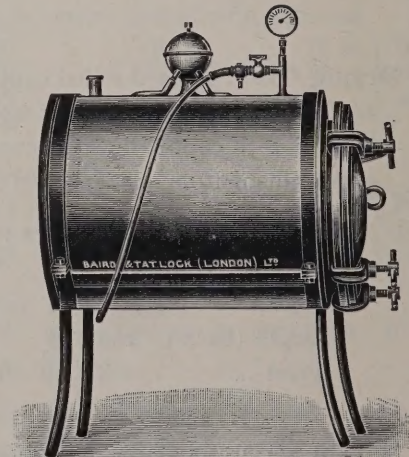
Drying Oven, of hard-rolled copper, with two chambers at top and one large chamber at bottom, fitted with pure tin worm condenser in copper bucket, with constant level arrangement from condenser to oven and one movable shelf to centre of each chamber, mounted on sheet-iron screen with rose-top Bunsen burners.

SC1618-SC1622

- SC1618 Size No. 1, with two chambers $6 \times 6 \times 7$ in. and one chamber $13\frac{1}{4} \times 6 \times 7$ in., back to front d £14 0 0
 SC1620 Size No. 2, with two chambers $7 \times 7 \times 8$ in. and one chamber $15\frac{1}{4} \times 8 \times 8$ in., back to front d £16 12 6
 SC1622 Size No. 3, with two chambers $8 \times 8 \times 9$ in. and one chamber $17\frac{1}{4} \times 9 \times 9$ in., back to front d £19 0 0



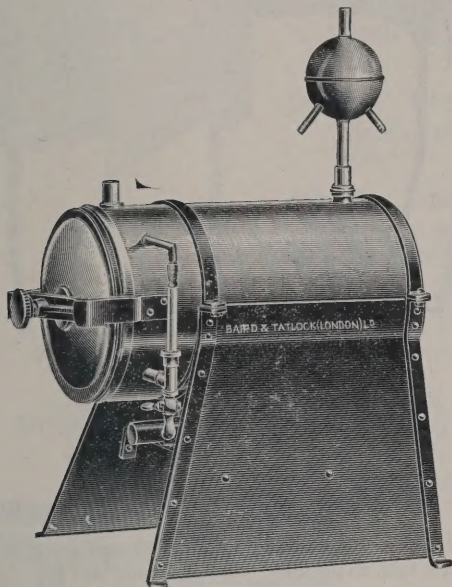
SC1626



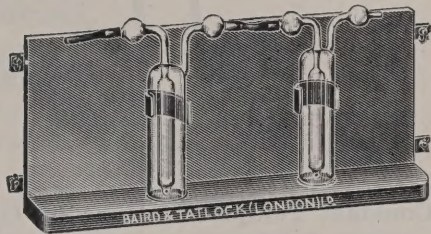
SC1628-SC1634

- SC1626 **Vacuum Oven**, for drying under reduced pressure; size of inner vacuum chamber, 11×6 in., with 6 in. opening. Complete with gauge and burner e £16 16 0
 SC1628 **Vacuum Drying Oven**, consisting of an inner chamber $20\frac{1}{4}$ in. long and $11\frac{3}{4}$ in. diameter, with a 1 in. water jacket all round. The oven is fitted with a heavy hinged glass door, a 4 in. ball condenser, water level, and vacuum gauge, with tubulures for thermometers and two movable shelves inside e £26 0 0

- SC1630 Vacuum Drying Oven, as SC1628, covered with asbestos e £28 10 0
- SC1632 Vacuum Drying Oven, similar to SC1628, specially suitable for use with coals which show a liability to oxidation, consisting of an inner chamber 12 in. long and 7 in. diameter, with a 1 in. water jacket all round. The oven is fitted with a heavy hinged glass door, a 4 in. ball condenser, water level, vacuum gauge, with tubulures for thermometers and two movable shelves e £16 10 0
- SC1634 Vacuum Drying Oven, as SC1632, covered with asbestos e £18 0 0
- These ovens can also be supplied with a wrought-iron tube burner firmly bolted to the legs and fitted with side aprons to protect the flame from draughts, at an extra charge of e £2 0 0

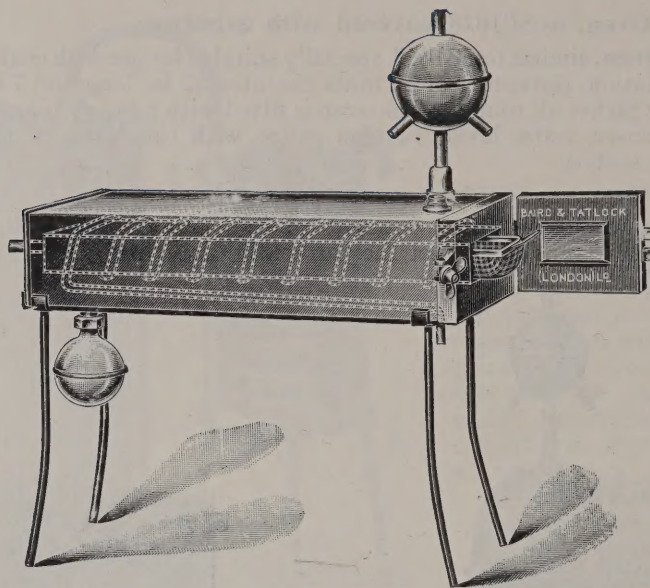


SC1638-SC1640



SC1645

- SC1638 Improved Type Drying Oven, to maintain a constant temperature of 105°–110° C.
- Expansion is allowed for in all connections between inner and outer jackets, thus eliminating a fruitful source of trouble in all previous types of moisture oven.
- The door has a ground joint and is vacuum tight. All joints are brazed and are, therefore, immune from attack by glycerine, etc.
- The inner cylindrical chamber, which is 7 in. diameter and 15 inches in length, is fitted with a shelf at the bottom. The space between inner and outer jackets can be filled with toluene or a glycerine solution (about 5 per cent.) to give a boiling point of 105° to 110° C.
- Dry preheated air is drawn through the inner chamber, two tubulures being provided, one on the inlet side for connecting to a wash bottle and one on the outlet side for connecting to a filter pump. The air passes through a coil in the heating chamber and enters at the bottom of the inner chamber.
- A metal ball condenser is fitted, also a gauge glass to indicate the level of liquid in the heating chamber : a thermometer tubulure is provided.
- Price, complete with gas burner and iron stand, as illustrated e £9 10 0
- SC1639 Drying Oven, as SC1638, but electrically heated. Consumption, 1000 watts e £12 12 0
- SC1640 Drying Oven, as SC1638, but 11 in. in length e £8 0 0
- SC1641 Drying Oven, as SC1639, but 11 in. in length. Consumption, 900 watts e £10 10 0
- SC1642 Spare Heating Elements (2) per set e £1 12 0
- 2-heat switch fitted to SC1639 or SC1641, 7/6 extra.
- SC1643 Vacuum Oven, double jacketed, similar to SC1638, complete with vacuum gauge e £10 5 0
- SC1644 Vacuum Oven, as SC1640, complete with vacuum gauge e £8 15 0
- Please state voltage when ordering.
- Drying Ovens SC1638–SC1644 can be supplied asbestos covered at an extra cost of each e £1 10 0
- SC1645 Drying Train, consisting of two wash bottles mounted on board for ovens SC1638–SC1644. (The board can also be supplied fitted with two U-tubes instead of the wash bottles if desired.) d £1 5 0

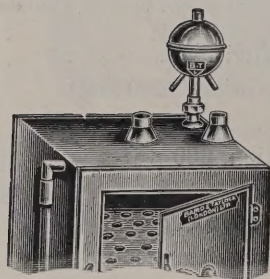


SC1646

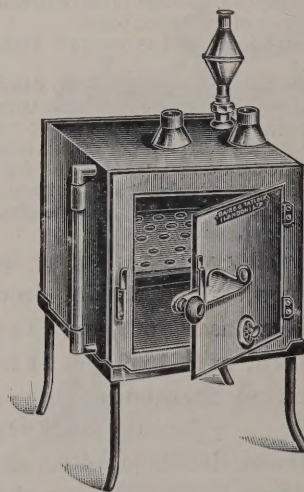
- SC1646 Constant Temperature Drying Oven**, designed by R. L. Siau, made in hard-rolled copper with gun-metal door and swing screws to fasten. Size of inside chamber, $18 \times 3 \times 1\frac{1}{2}$ in., with wire gauze tray for carrying the drying capsule fitting the entire length of chamber. Brazed copper flask connected by screw coupling and nickel-plated ball condenser at top Price, complete with stand **d £9 0 0**

The oven may be heated by water, toluene, or other liquid of constant boiling point, and the heating spiral, which is coiled between inner and outer jacket, is connected to a water filter pump. A constant stream of heated air is thus drawn through the inner chamber.

The temperature can be varied according to the liquid used through which the heating coil passes. [For further description see "Journal of the Society of Chemical Industry," vol. 30, 61 (1911)].



SC1647

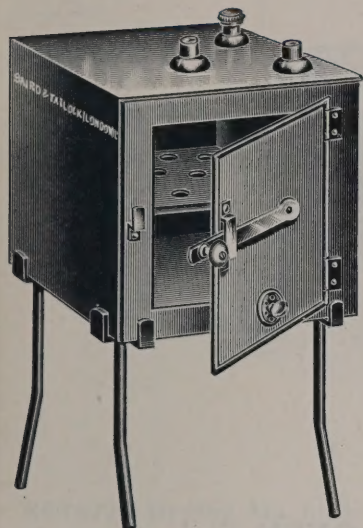


SC1648

- SC1647 Reflux Ball Condenser.** Any of the Hot Water Ovens in this section can be fitted with a reflux ball condenser, as illustrated, at an extra cost of **d £0 15 0**

- SC1648** Or with reflux air condenser at an extra cost of each **d £0 10 0**

BRAZED OVENS FOR HIGH TEMPERATURES.



SC1652

SC1652 Drying Oven, of stout copper, all joints brazed for drying at high temperatures, to 200° C., on iron stand. The jacket may be filled with oil, glycerine, etc., according to temperature required. For drying ovens in constant use these are much more durable and will not leak.

Inside sizes of oven :

Height	....	6	8	10 in.
Width	....	6	8	12 "
Depth (back to front)	....	6	8	10 "
Price	....	d £5 10 0	d £6 17 6	d £9 7 6

SC1654 Drying Oven, as above, but electrically heated.

Consumption in watts	700	900	1300
Price	 d £7 10 0	d £9 2 6	d £12 2 6

SC1656 Spare Heaters for above :

Number in set	....	1	1	2
Price, each	....	d 14/6	d 16/-	d 14/6

SC1657 Drying Oven, brazed throughout, as above, but with two chambers for heating by gas.

Size of chambers	each	8 × 8 × 8	10 × 10 × 10	12 × 10 × 10 in.
Price	....	d £13 0 0	d £16 0 0	d £19 0 0

SC1658 Drying Oven, brazed joints, as SC1657, but electrically heated two chambers.

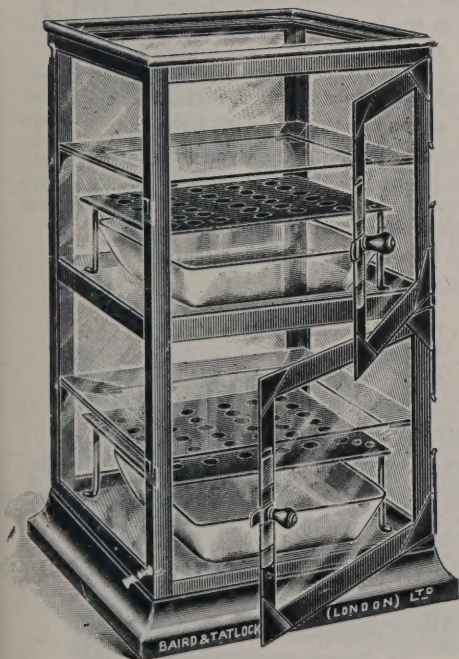
Size of chambers	8 × 8 × 8	10 × 10 × 10	12 × 10 × 10
Consumption in watts	600	700	800
Price	 d £16 10 0	d £19 10 0	d £22 10 0

SC1659 Spare Heaters for above :

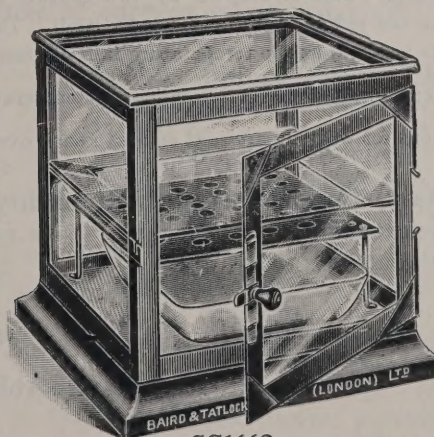
(2 in set)	d 32/-	d 33/-	d 35/- per set.
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See also SC1460 and SC1462.

Brazed Ovens of other sizes and number of compartments can be made to order.



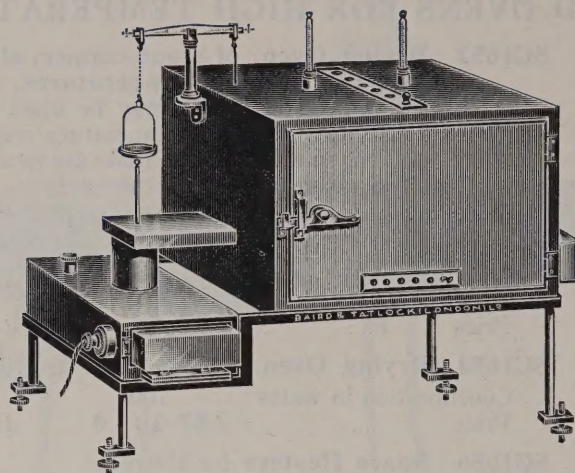
SC1660



SC1662

SC1660 Drying Chamber or Desiccator, of glass, in stout nickel-plated brass frame, with perforated metal stand, glass shelves and dish for the drying agent, with two compartments 12 × 10 × 10 in., fitted with doors e £8 0 0

SC1662 Drying Chamber or Desiccator, of glass, in stout nickel-plated brass frame, with perforated metal stand, glass shelf and dish for the drying agent, with one compartment 12 × 10 × 10 in., fitted with door e £5 5 0



SC1665

CONSTANT TEMPERATURE AND HUMIDITY OVEN.

This oven has an available space 18 inches long, 12 inches high and 14 inches deep from back to front, and is fitted with a hinged door, giving an opening of $13\frac{1}{2}$ inches by $10\frac{1}{4}$ inches; it is constructed of heavy gauge sheet-copper covered with hard asbestos compound, and is mounted on an iron stand. Wet and dry bulb thermometers are fitted. Two separate electrical heating elements or gas burners are provided, one to heat a water bath which is accommodated at the side of the oven, and which supplies it with moisture in the form of steam, and the other to maintain the oven at the required temperature.

Humidity Control.—This is effected by an automatic arrangement which is adjusted to shut off the steam supply when the desired degree of humidity has been reached, and to readmit steam as soon as the air in the oven becomes drier. The adjustment is a simple one and the regulator will maintain the conditions in the oven with an accuracy of 5 per cent.

Heating Control.—This is effected by two capsule regulators, one controlling the temperature of the bath and the other the temperature of the oven itself. These regulators make and break the heating circuits (or regulate the gas burners) as the temperature falls or rises below or above the set temperature.

The arrangement is capable of maintaining any temperature from 25° to 50° C., with an accuracy of $\pm 1^{\circ}$.

Full instructions for working are sent out with each oven.

SC1665 Constant Temperature and Humidity Oven, electrically heated, complete with sufficient capsules to cover the above range of temperatures. Current consumption 1 kilowatt Price *d* £45 0 0

SC1666 Spare Heaters (2 in set) per set *d* £2 10 0

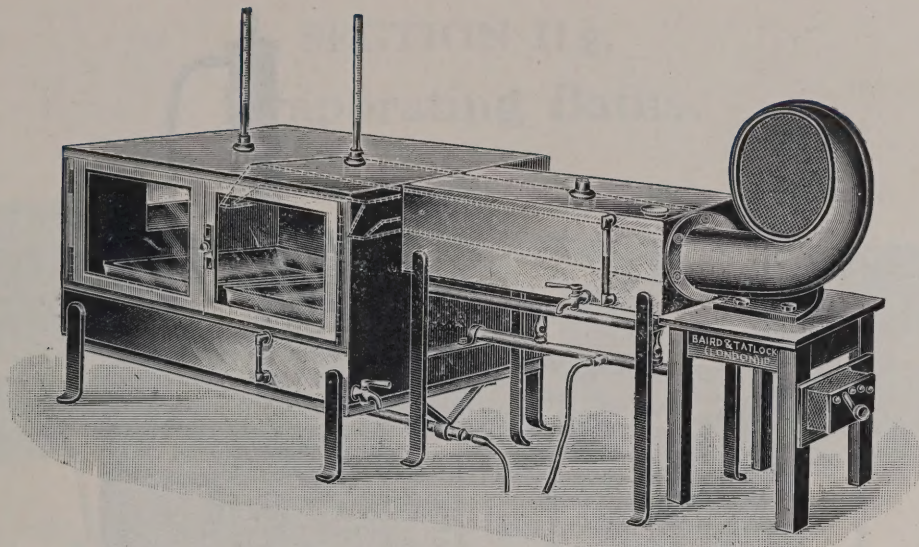
Please state voltage when ordering.

SC1667 Constant Temperature and Humidity Oven, as above, but gas heated Price *d* £40 0 0

SC1668 Spare Capsules, any range per pair *d* £0 15 0

Other patterns of Humidity Ovens made to order.

Drawings and Particulars on application.



SC1672

SC1672 Drying Machine, used for drying quantities of material in a current of air, especially where the temperature of the drying oven would be injurious to plant and animal tissues.
Price without motor and fan e £42 15 0

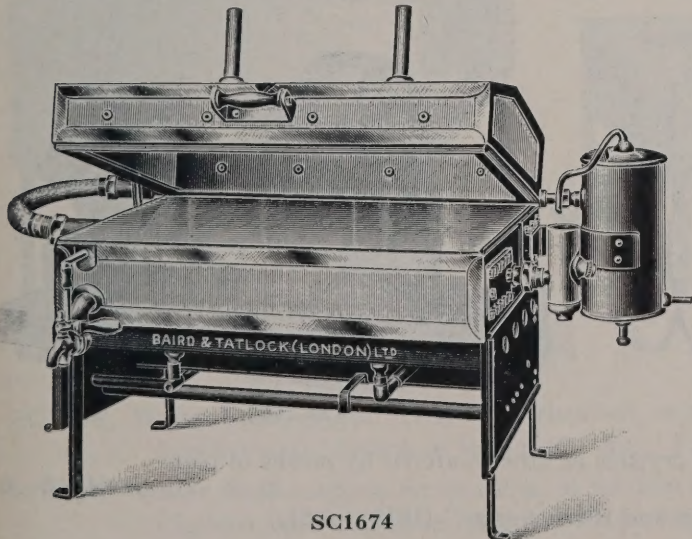
SC1673 Drying Machine, as above, but complete with motor, fan, and regulating resistance e £52 17 6

Fan.—Capable of delivering 25 cubic metres of air per minute, driven by electric motor.

Hot Air Oven.—Of copper, asbestos covered and heated by series of rose-topped burners (not water-jacketed as shown in illustration).

Drying Chamber.—Of copper, with two glazed doors. The base of the chamber is formed by a hot water oven which is heated by a series of burners. The material to be evaporated is contained in large flat dishes which stand upon the floor of the chamber. The current of hot air is deflected upon the surfaces of the liquid in the chamber. A circular opening in the end of the chamber allows the vapours to pass directly into a flue or fume cupboard, therefore liquids which give off disagreeable vapours can be evaporated without annoyance. Five to six litres of aqueous liquid can be evaporated to dryness at a temperature of 22°–23° C. in six to eight hours. The method is well suited for evaporating liquids that are injured by heat, the only exceptions being those fluids that are acted on by atmospheric oxygen. The size of the drying chamber is approximately 49 × 13 × 12 in. high.

Please state voltage and nature of current when ordering.

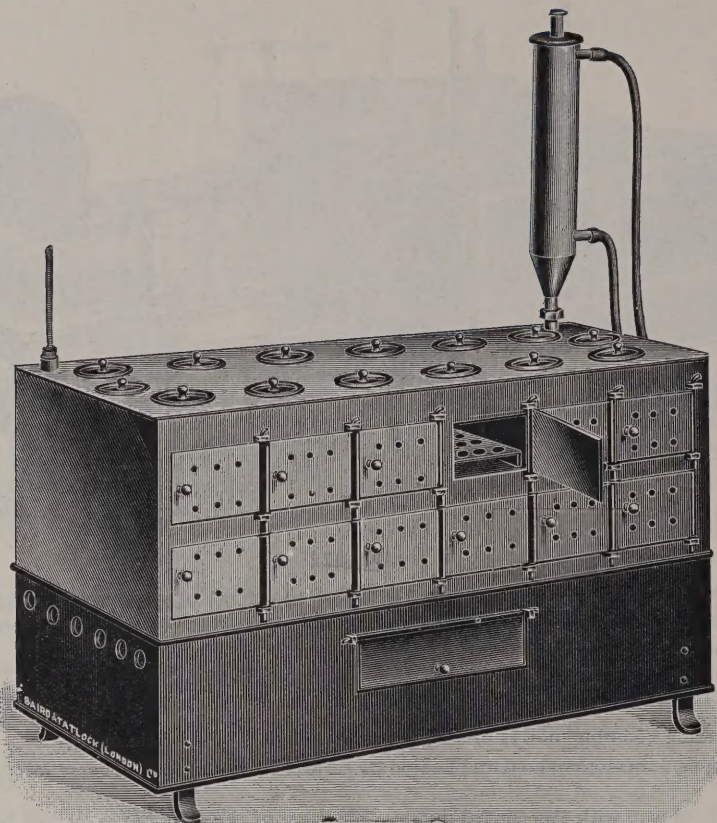


SC1674

SC1674 Combined Evaporator, Drier and Still, improved pattern, as supplied to Dr. Gordon Parker at the London Leather Industries Laboratory. The bath is fitted with a special hollow hinge, which enables the cover to be lifted without the necessity of uncoupling any connections or interrupting the flow of steam to the condenser. A uniform temperature of 98°–99° C. is easily maintained in the heating chamber. The hot plate measures 26 × 16 in. and the domed cover provides ample space for accommodating medium-size flasks, beakers, etc. The output of distilled water is approximately 3 litres per hour.

Price complete e £39 0 0

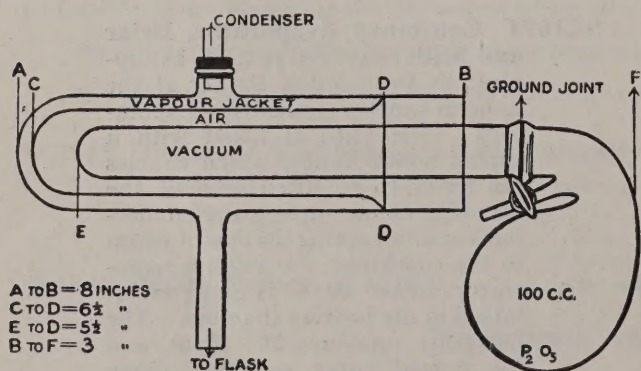
SC1675 Combined Evaporator and Drier, as above, but arranged for heating by steam. Complete with steam coil and coupling for connection to steam supply Price e £40 10 0



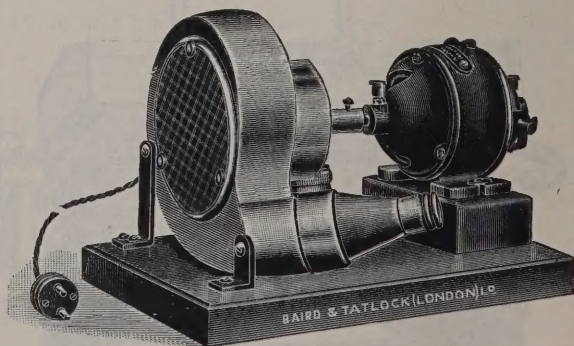
SC1676

SC1676 **Drying Oven**, of hard-rolled copper, double walled, with copper condenser, having twelve chambers $4 \times 3 \times 8$ in. back to front, with perforated shelf, twelve holes for evaporating dishes, as illustrated Price, with burner e £22 0 0

SC1677 **Drying Oven**, as above, but with pure tin worm condenser in copper bucket, for obtaining distilled water Price, with burner e £24 10 0



SC1678



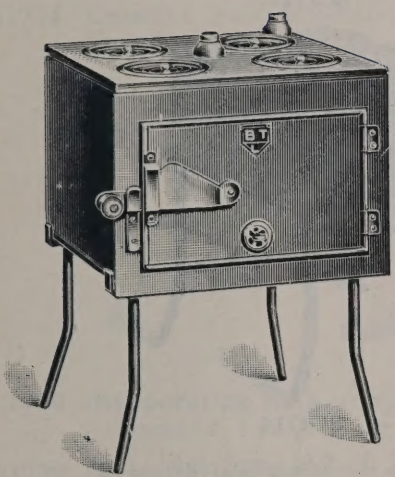
SC1680

SC1678 **Apparatus** for drying small quantities of crystals or other material by means of phosphorus pentoxide e £1 10 0
(See Plimmer, "Practical Organic and Biochemistry" (1918), p. 21.)

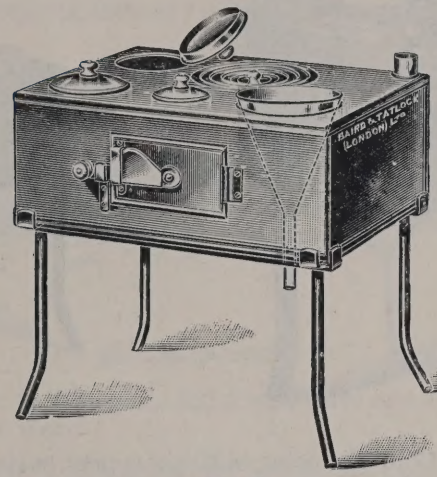
SC1680 **Electric Fan**, to assist evaporation at ordinary temperatures e £8 8 0
Please state voltage and current when ordering.



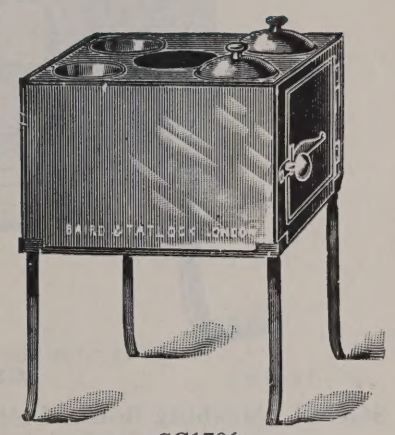
SECTION II g.
Evaporating Baths.



SC1700

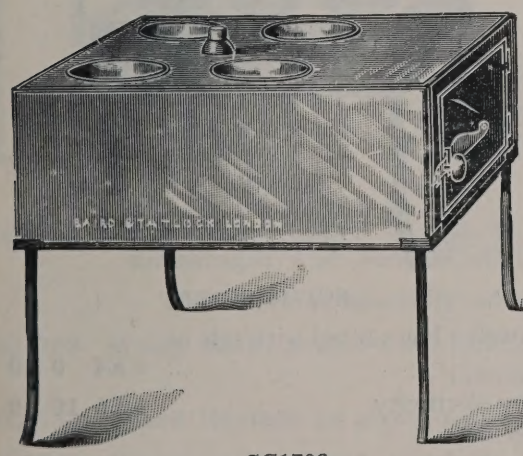


SC1702

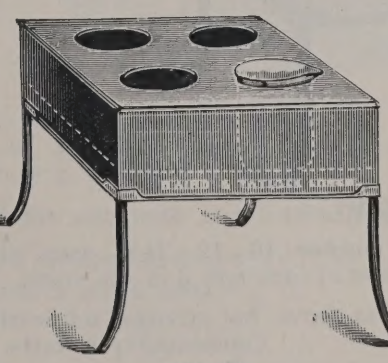


SC1706

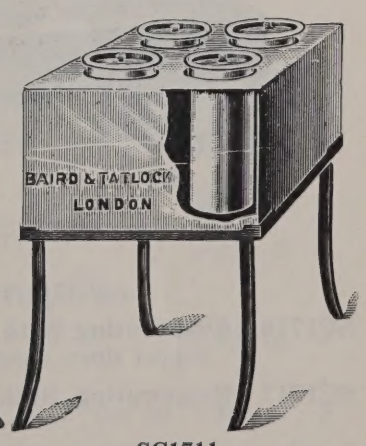
- SC1700 Evaporating Oven and Bath combined, oven with chamber 10 × 10 × 6 in., top fitted with four evaporating holes, 3¼ in. diam., provided with copper rings b £4 10 0
- SC1702 Water Bath, copper, 13 × 9½ × 5 in., on stand, with one set of 4½ in. copper rings and two holes with covers, 3 in., hot water funnel for filtering and small drying chamber with door d £3 10 0
- SC1704 Water Bath, copper, as above, fitted with constant level to bath d £3 17 0
- SC1706 Drying Oven, copper, for brewers' chemists, with chamber, 7 × 6 × 6 in., two holes in top for 2¾-in. funnels, one for 4½-in. basin, and two for 3-in. basins, with lids. Price with stand b £3 15 0



SC1708

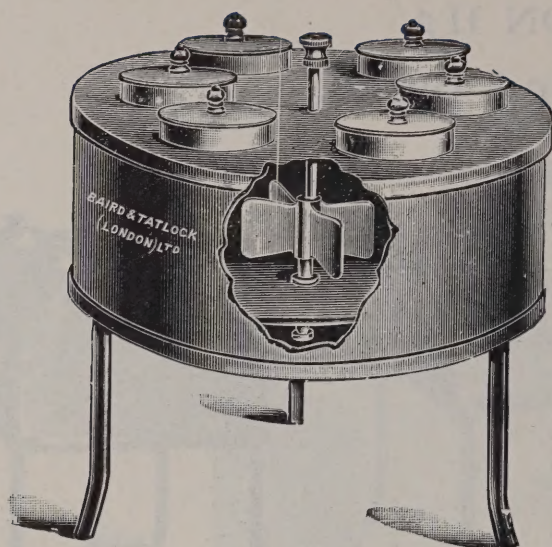


SC1710

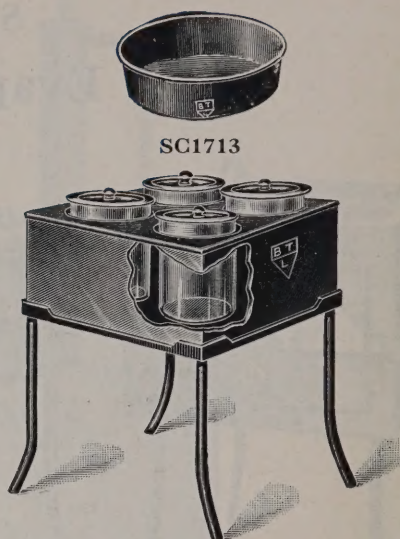


SC1711

- SC1708 Water Bath, copper, for brewers' chemists, with water-jacketed chamber, 10 × 4½ × 5 in., four hot-water funnels in top for filtering. Price with stand b £4 10 0
- SC1710 Water Bath, copper, for mashing, as used by brewers' chemists, with four holes 4¼ in. diameter, for No. 7 glass beakers, with perforated false bottom and stand b £2 10 0
- SC1711 Mashing Bath, copper, 8 × 8 × 4 in., with perforated false bottom and four spun copper beakers, 4 × 2½ in., with lids, on stand b £2 10 0

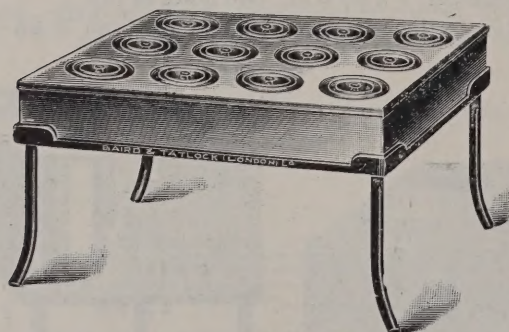


SC1712

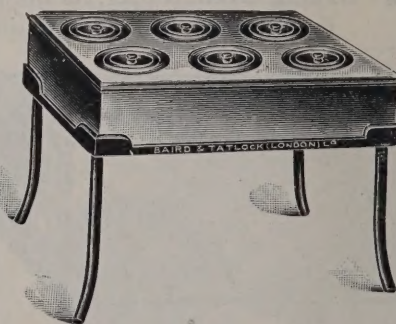


SC1714

- SC1712 **Mashing Bath**, of copper, 12 in. diameter, with six copper beakers, 5 × 3 in., and lids, fitted with false bottom on which the beakers rest, and stirring arrangement so that the beakers can be maintained at an even temperature d £5 5 0
- SC1713 **Copper Capsules**, for testing malt, 2½ in. diameter each 2/- ; per doz. d £1 3 0
- SC1714 **Experimental Dye Bath**, to take four glass beakers, with four holes 4 in. diameter, fitted with sets of rings and glass beakers d £2 10 0
- SC1715 **Experimental Dye Bath**, as above, but with paddle stirring arrangement, regulator, and thermometer, complete with four sets of rings 4 in. diameter and four glass beakers d £5 5 0



SC1716-SC1717



SC1719-SC1720

- SC1716 **Evaporating Bath, copper**, 16 × 12 × 3½ in. deep, with twelve holes fitted with sets of copper rings, diameter of each hole 3 in., on stand b £4 0 0
- SC1717 **Evaporating Bath**, as above, but arranged for heating by electricity
Consumption in watts, 1000. b £6 10 0
- SC1718 **Spare Heaters** for above (2 in set) per set b £1 10 0
- SC1719 **Evaporating Bath, copper**, as SC1716, 12 × 9 × 3½ in. deep, with six holes 3 in. diameter, each hole fitted with set of copper rings b £2 10 0
- SC1720 **Evaporating Bath**, as above, but arranged for heating by electricity
Consumption in watts, 800. b £4 10 0
- SC1721 **Spare Heater** for above each b £0 15 0

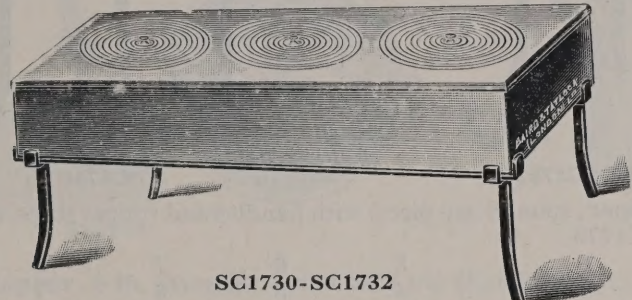
Please state voltage when ordering.



SC1722 Evaporating Bath, copper, as SC1716, with holes 3 in. diameter, fitted with sets of copper rings, fitted with steam coil inside for heating (see Fig. SC1432), with union left for connecting to main supply, and exit pipes.

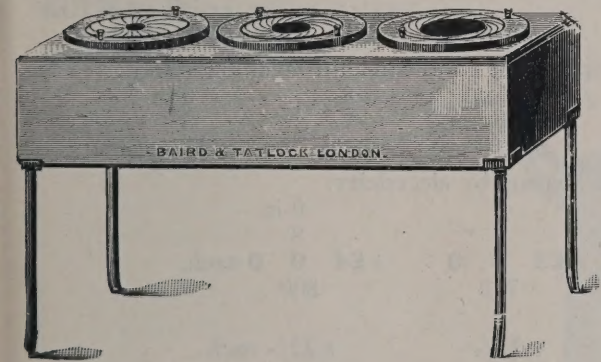
Bath with	....	....	....	....	12 holes.	6 holes.
Price	....	....	....	....	b £5 0 0	b £3 15 0

SC1724 Constant level fitted to Baths SC1700-SC1742 if required, extra b £0 10 0 b £0 10 0

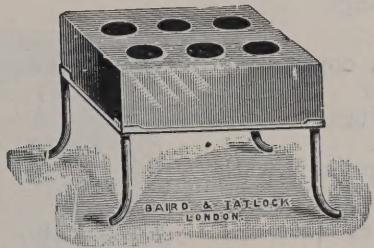


SC1730-SC1732

- SC1730 Evaporating Bath, copper, 24 × 8 × 5 in., fitted with three sets of porcelain rings 6½ in. diameter, 7 rings in set, on stand b £4 11 0
- SC1732 Evaporating Bath, as above, but arranged for heating by electricity b £6 12 0
Consumption in watts, 1800.
- SC1733 Spare Heaters for above (2 in set) per set b £1 13 0



SC1736



SC1740-SC1742



SC1744

SC1736 Water Bath, copper, size 19 × 6½ × 4 in., with three openings fitted with nickel iris-diaphragm, 4 in. diameter, closing to ½ in. on stand b £7 0 0

The above is specially adapted for use with Fat Extraction Apparatus.

SC1738 Water Bath, as above, but arranged for heating by electricity b £9 10 0
Consumption in watts, 1800.

SC1739 Spare Heaters for above (2 in set) per set b £1 7 0

SC1740 Water Bath, copper, 10 × 8 × 4½ in., for milk analysis, etc., with six holes and nickel capsules, 2½ in. diam. Price, with stand b £1 17 6

SC1742 Water Bath, as above, but heated by electricity b £3 15 0
Consumption in watts, 800.

SC1743 Spare Heater for above b £0 16 6

SC1744 Nickel Capsules, 2½ in. diam., for Nos. SC1740-SC1742 each b 1/6 ; per doz. b £0 17 0

Please state voltage when ordering.



SC1750-SC1752



SC1756

SC1750 Water Baths, copper, spun in one piece, with handles and copper rings, edges of rings as shown in Fig. SC1776.

Diameter	....	5	6	7	8	9 in.
No. of rings	....	4	5	6	7	8
Price	....	b 7/6	b 7/9	b 10/6	b 12/-	b 13/6 each.

SC1752 Iron stands for above, extra b 1/9 b 2/3 b 2/6 b 3/- b 3/6 „

SC1754 Water Baths, copper, as above, but arranged for heating by electricity.

Diameter	....	5	6	7	8	9 in.
No. of rings	....	4	5	6	7	8
Price	....	b £2 7 6	b £2 10 0	b £2 15 0	b £3 0 0	b £3 6 0 each.
Consumption in watts	600	650	700	750	800	

SC1755 Spare Heaters for above

(One to each set) b 20/- b 20/- b 20/- b 22/- b 22/- each.

SC1756 Water Baths, copper, spun in one piece, with copper rings and constant level, on stand.

Diameter	....	....	....	7	8	9 in.
No. of rings	....	....	....	6	7	8
Price	....	....	....	b 18/-	b 19/6	b 21/- each.

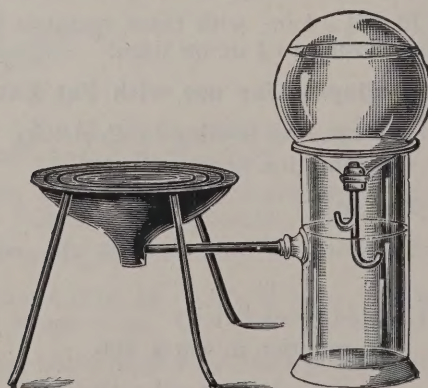
SC1758 Water Baths, copper, as above, but arranged for heating by electricity.

Diameter	....	....	....	7	8	9 in.
No. of rings	....	....	....	6	7	8
Price	....	b £2 10 0	b £3 0 0	b £4 0 0	b £4 0 0	each.
Consumption in watts	....	700	750	800		

SC1759 Spare Heaters for above

(One to each set) b 20/- b 22/- b 22/- each.

Please state voltage when ordering.



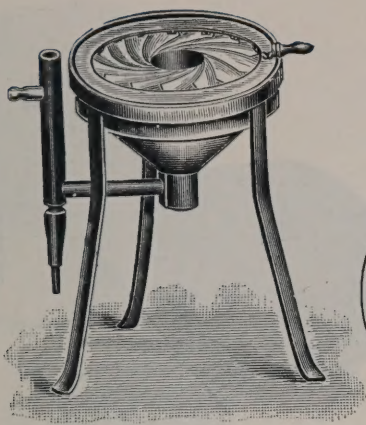
SC1760-SC1762

SC1760 Water Bath, copper, 9 in. diameter, with rings, constant level arrangement, and glass water reservoirs

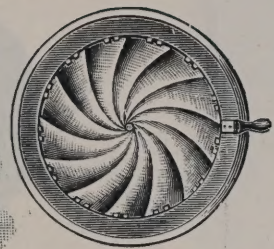
.... d £2 5 0

SC1762 Water Bath, as above, 7 in. diameter, with rings and constant level arrangement, etc.

d £1 19 0



SC1763



SC1764

SC1763 Water Bath, copper, 8 in. diameter, fitted with iris-diaphragm and constant level, on stand d £3 15 0

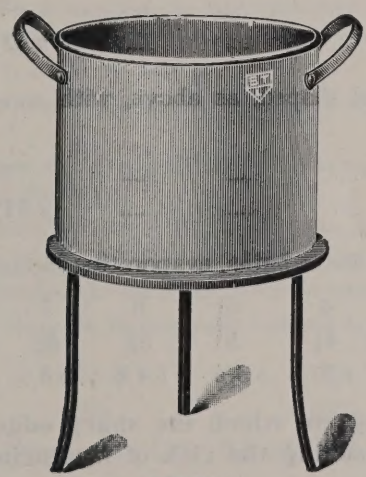
Water Bath, copper, cylindrical form, fitted with handles and sets of copper rings, for use with electric hot plates, etc., or with stands for use with gas burners.

Diameter	....	....	6	8	10 in.
Depth	....	....	5	6	7 „

SC1764 Prices, without stand b 15/- b 17/6 b 25/-

SC1765 Prices, with stand b 17/6 b 21/- b 28/6

(See Nos. SC1840-SC1878 for electric hot plates suitable for above.)



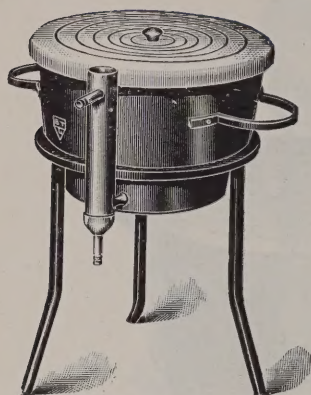
SC1766

Water Baths, light enamelled iron, white inside, blue outside, with handles, with or without copper rings.

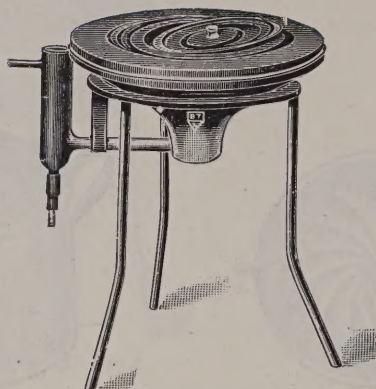
Diameter	....	....	6½	8¾	9½	10¼	11 in.
Height	....	....	5	7¼	8	8¾	9½ „

SC1766 Prices, without rings but with stand b 5/- b 7/6 b 11/- b 17/- b 18/- each.

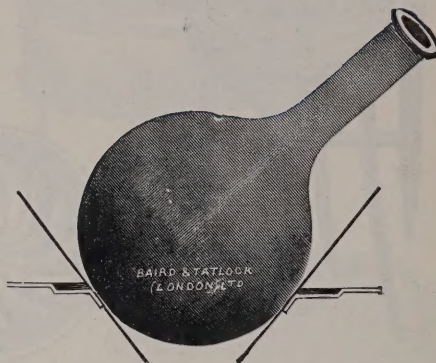
SC1767 Prices, with copper rings and stand b 8/6 b 14/6 b 19/6 b 25/6 b 26/6 „



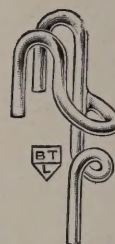
SC1768



SC1774



SC1776



SC1778

SC1768 Water Bath, copper, with set of 7 porcelain rings, diameter of bath $7\frac{1}{4}$ in., on stand, with constant level b £1 15 0

SC1770 Water Bath, as above, but arranged for heating by electricity b £3 18 0
Consumption in watts, 350.

SC1771 Spare Heater for above b £0 13 6

SC1772 Water Bath, copper, as above, without constant level, on stand b £1 7 0

SC1774 Water Baths, copper, funnel shaped, with constant level and set of 7 copper rings, on stand.

Diameter	....	....	....	....	7	9 in.
Price	....	....	....	....	b 22/6	b 25/- each.

SC1775 Water Baths, copper, funnel shaped, as above, with constant level and porcelain rings, on stand.

Diameter	....	....	....	....	7	9 in.
Price	....	....	....	....	d 31/-	d 37/- each.

SC1776 Sets of Copper Rings, for water baths, evaporating baths, etc.

No. of rings	....	4	5	6	7	8	9	10
Diameter of largest ring	....	$4\frac{1}{4}$	5	$5\frac{3}{4}$	$6\frac{5}{8}$	$7\frac{5}{8}$	$8\frac{5}{8}$	$9\frac{5}{8}$ in.
Price	....	b 3/-	b 3/6	b 4/6	b 5/-	b 6/-	b 7/-	b 8/6 per set.

Above baths are fitted with rings in which the sharp edge is turned down, as shown in Fig. SC1776, thus lessening the risk of fracturing flasks or beakers.

SC1778 Constant-Level Syphon, designed by Mr. Attwood of Ronuk Ltd. for maintaining the water level in water baths, washing tanks, etc.

A. In glass, for small baths, length 6 in.	....	....	....	....	c £0 2 6
B. In copper, for tanks, etc., length 10 in.	....	....	....	....	c £0 4 6

The level of water fluctuates between lower end of main tube and bottom edge of side bend, where it joins the main tube. Once the auxiliary syphon is filled, the syphon is automatic. The level never drops below the lowest edge where auxiliary tube joins the main tube even if no water is run in.



SC1787 Ordinary Water Bath, with set of Copper Concentric Reducing Rings.

Complete with two yards of Flexible Cord and Adapter.



SC1788 With Water Inlet, set of Copper Concentric Reducing Rings, and Brass Constant Water Level Fitting.

Complete with two yards of Flexible Cord and Adapter.

Electrically Heated Laboratory Water Baths, porcelain enamelled cast-iron with copper concentric reducing rings.

A new and improved series of electrically heated water baths made of cast-iron, white porcelain enamelled inside and japanned outside.

The modified shape of rim as shown by SC1787 is recognised by laboratory specialists as a distinct improvement.

The copper ring usually fitted to the outside rim is discarded, the bath itself being made with an extended recessed rim to support the concentric reducing rings, the interior being thus completely accessible for cleaning out when required.

The baths are made in three sizes, viz., 13, 17, and 21 centimetres.

These were only decided upon after careful consideration, and, in conjunction with the reducing rings, represent a most useful and efficient series.

The concentric reducing rings are made of copper, of a substantial quality. The recess is made with a curved inside edge, which affords a better grip than the ordinary plain edge.

When supplied with inlet and constant water level, as shown in SC1788, the fitting, in addition to being screwed in, is secured by a set screw, which makes it impossible for it to get out of its proper vertical position.

These electric water baths are efficient and reliable, and are always ready for immediate use.

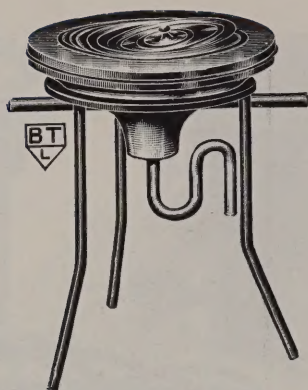
Spare heating elements can be supplied, and these can be very easily replaced, being fixed by two screws only.

Sizes	....	....	....	13	17	21 centimetres.
Loading	....	....	....	350	550	700 watts.
Set of Rings comprise	....	4 Rings and 1 Lid	6 Rings and 1 Lid	8 Rings and 1 Lid		
SC1787 (without constant level)	....	c 35/-	c 42/-	c 55/-	each.	
SC1788 (with constant level)	....	c 44/-	c 50/-	c 63/-	„	
Spare Heating Elements		c 4/-	c 6/-	c 8/-	„	

SC1789 Three-Heat Regulator, with triple flexible cord, extra for each size, each c £0 3 6

Standard Voltages : 100/110, 200/220, and 230/250.

When ordering please state voltage required.



SC1790



SC1791

SC1790 Steam Bath, copper, funnel shape, with inlet and outlet and trap tube at bottom, complete with rings and stand.

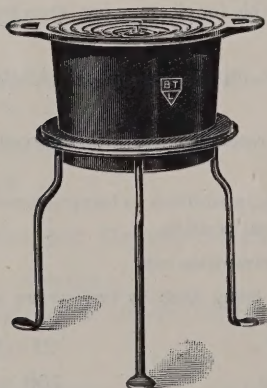
Diameter	....	....	....	7	9 in.
Price	....	....	....	b 24/-	b 27/-

Steam valve fitted to inlet tube, extra, b 7/-

SC1791 Steam Bath, copper, fitted with internal coil, nut and union complete with rings and stand.

Diameter	....	....	....	7	9 in.
Price	....	....	....	b 40/-	b 43/-

Steam valve to inlet tube, extra, b 7/-



SC1802



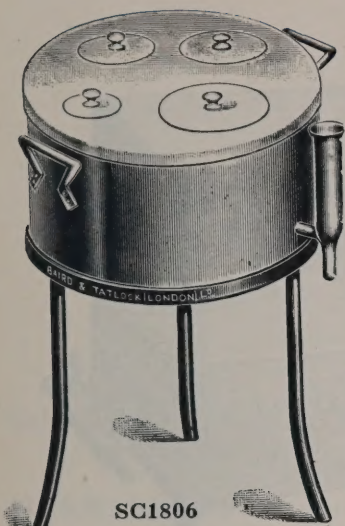
SC1804

SC1802 Water Baths, cast-iron, white enamelled inside, japanned outside, complete with stands and copper concentric reducing rings with curved inside edges.

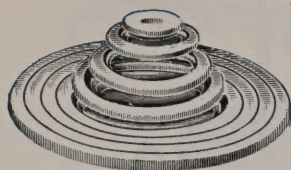
Size	....	....	....	5½	6¾	8½ in.
With	....	....	....	4 rings, 1 lid.	6 rings, 1 lid.	8 rings, 1 lid.
Price	....	....	....	f 9/-	f 12/-	f 15/-

SC1804 Water Baths, as above, but with constant level.

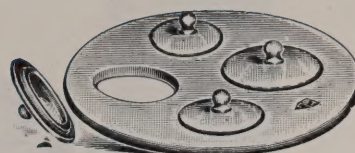
Price				f 15/-	f 18/-	f 21/- each.
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SC1806



SC1807



SC1808



SC1809

SC1806 Water Bath, copper, with constant level and porcelain cover, fitted with four holes and lids for same.

Diameter of cover	....	180 mm.	230 mm.
Size of holes	....	40, 45, 53, and 60 mm.	45, 53, 60, and 65 mm.
Price, with stand	....	b 32/-	b 38/-

***SC1807 Porcelain Rings** for water baths, glazed on top, in sets, with centre cover.

Sets of	1 to 11	1 to 7	1 to 5	1 to 4	1 to 3
Largest ring	230	160	120	97	76 mm. diam. outside.
Price	d 26/6	d 13/3	d 9/6	d 8/3	d 6/4 per set.

SC1808 Porcelain Covers for water baths (see Fig. SC1806), with four holes and lids, for evaporating dishes, etc.

Diameter	....	180 mm.	230 mm.
Size of holes	....	40, 45, 53, and 60 mm.	45, 53, 60, and 65 mm.
Price	....	d 8/6	d 13/6 each.

SC1809 Forcing Tray, copper, with tube at corner for filling and brass tap for emptying, on stand, for brewers' use.

	A	B	C	D
Sizes	24 × 16 × 4	18 × 12 × 3	15 × 11 × 3	12 × 10 × 3 in.
Price	d £3 15 0	d £3 3 0	d £2 17 6	d £2 12 6

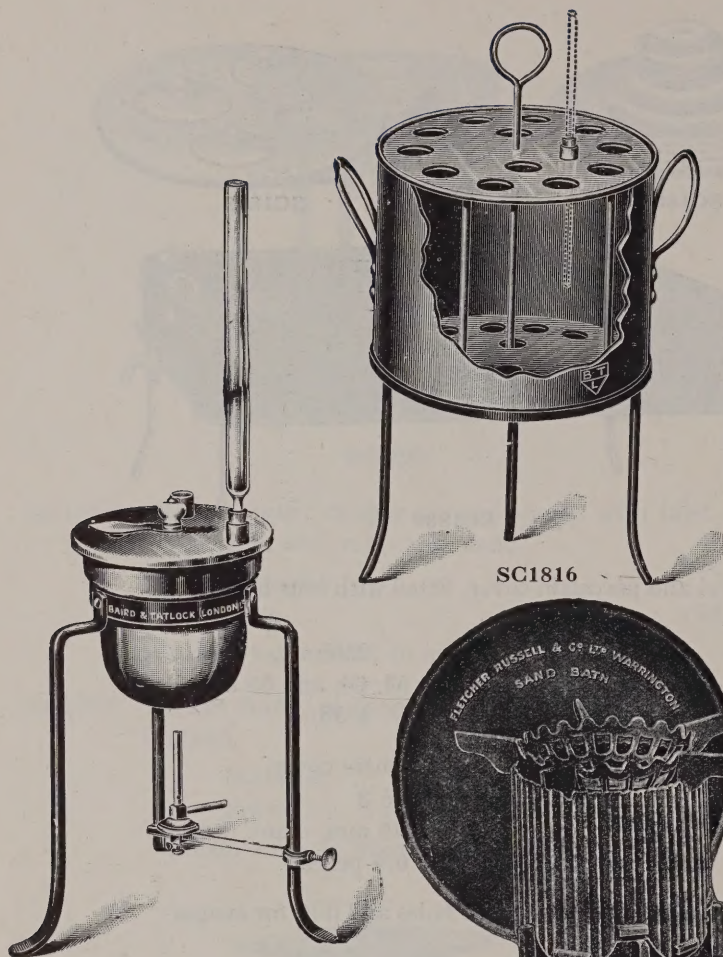
SC1810 Forcing Tray, copper, as above, but arranged for heating by electricity.

	A	B	C	D
Sizes	24 × 16 × 4	18 × 12 × 3	15 × 11 × 3	12 × 10 × 3 in.
Price	d £6 15 0	d £5 15 0	d £5 5 0	d £5 0 0
Consumption in watts	350	300	250	200

SC1812 Spare Heaters for above:

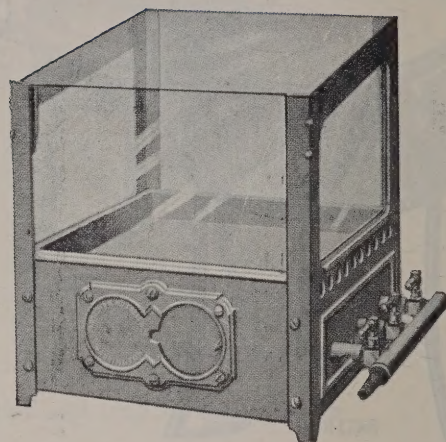
Number in set	2	2	1	1
Price	d 20/6	d 20/6	d 20/6	d 20/6 each.
	d 40/-	d 40/-	—	— per set

Please state voltage when ordering.

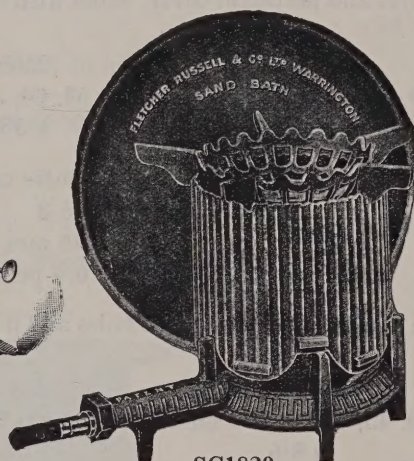


SC1814

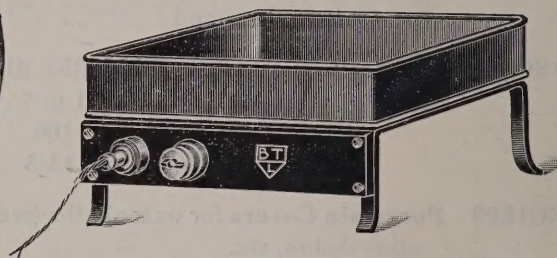
SC1816



SC1822



SC1820

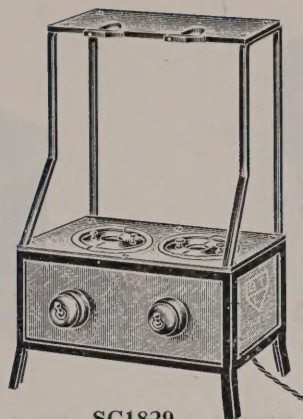


SC1824

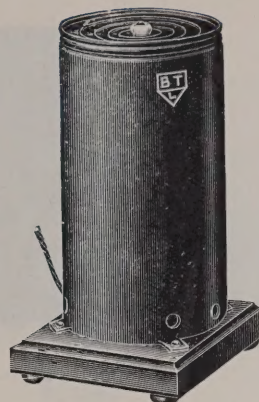
- SC1814 Crucible Drying Bath, Victor Meyer's**, of heavy copper, brazed, with double walls, 10 x 10 centimetres inside, with porcelain plate, and burner on stand *b* £2 10 0
(See "Berichte der deutschen Chemischen Gesellschaft" (1885), p. 2999.)
- SC1816 Water Bath, copper**, 6 in. diameter, with removable holder for twelve test tubes, holes numbered 1 to 12, tubulure for thermometer, on stand 8 in. high *b* £1 1 0
- SC1820 Fletcher's Laboratory Burners and Sand Baths.**
- | | | | | |
|---|-----------------|-----------------|---------------|---------------|
| No. | 10 | 15 | 20 | 30 |
| Support for flasks, diameter | 4 $\frac{1}{4}$ | 5 $\frac{1}{4}$ | 7 | 8 in. |
| Support for flat vessels, diameter | 6 $\frac{1}{2}$ | 7 $\frac{1}{2}$ | 9 | 11 " |
| Sand bath | 9 | 10 | 13 | 15 " |
| Price, complete.... | <i>d</i> 13/9 | <i>d</i> 17/3 | <i>d</i> 25/- | <i>d</i> 55/- |
- SC1822 Sand Bath**, for laboratory use, with cover for evaporating corrosive liquids. Size of bath, 12 in. square inside. Fitted with burners with tap to each for controlling the temperature in any part. The back is open, to fit against a wall with a flue *d* £6 4 0
- SC1824 Sand Bath**, electrically heated, with 3 point heater giving heat regulation. The bath is strongly made and the heaters are easily replaced.
- | | | | |
|---------------------------|------------------|------------------|------------------|
| Size | 10 x 6 | 12 x 8 | 18 x 12 in. |
| Price | <i>b</i> £2 18 0 | <i>b</i> £3 12 0 | <i>b</i> £4 15 0 |
| Consumption in watts | 700 | 1250 | 2000 |
- SC1826 Spare Heater** for above *b* 25/- *b* 28/- *b* 35/- each.



SC1827



SC1829



SC1830

SC1827 Sand Baths, shallow tinned iron.

Diameter	....	4	5½	6¾ in.
Price	....	d 1/3	d 1/6	d 2/- per doz.

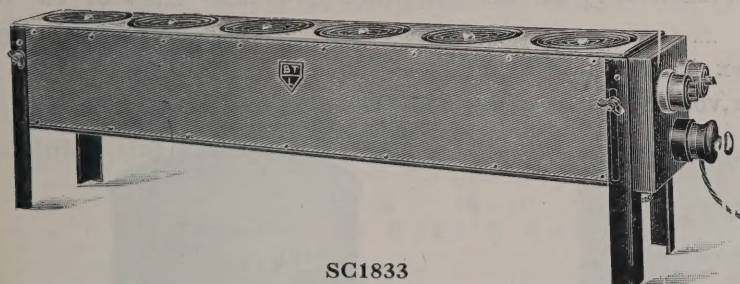
SC1829 Sand Bath, electrically heated, fitted with support and clip, as used at the Fuel Research Station for moisture determinations, etc.

(a) For one apparatus, with switch	....	....	....	....	b £5 5 0
(b) For two apparatus, with switch for each	....	....	....	....	b £7 10 0
(c) For three apparatus, with switch for each	....	....	....	....	b £9 7 6

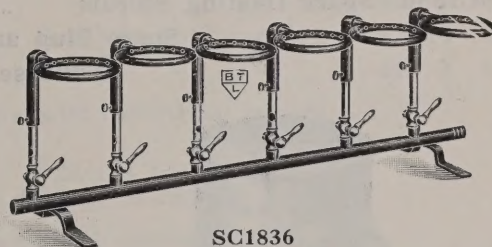
Consumption for use with toluene, 550 watts; for use with benzene, 400 watts.

SC1830 Evaporation Apparatus, electric, devised by R. Tyler, for evaporation in open dishes or distillation in flasks without risk of fire or explosion, consisting of a metal case, lagged internally with asbestos, mounted on board with lamp holder. Will take basins or flasks from 1½ in. to 5 in. diameter. Without lamp

.... b £1 1 0



SC1833



SC1836

APPARATUS DESIGNED BY G. B. BROOK, F.I.C.,
for Use in Metallurgical Analysis.

SC1833 Rapid Evaporator, electrically heated. This consists of a strong galvanised iron air bath measuring 4 ft. by 8 inches by 8 inches, with stainless steel cover, provided with six openings and fitted with six sets of stainless steel rings, the largest opening being 6 in. diameter. The heating elements are mounted on fireclay blocks and are adjustable in height by means of wing nuts working in slots on their supports. The bath is fitted with a 3-heat control, by means of which, and the adjustable elements, rapid evaporation and perfect control can be attained

Price b £15 0 0

Please state voltage when ordering.

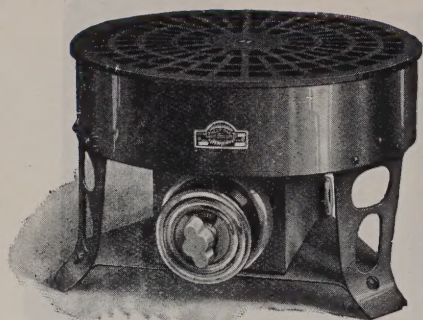
Other sizes made to order. Prices on application.

SC1834 Set of 6 Stainless Steel Rings, as above

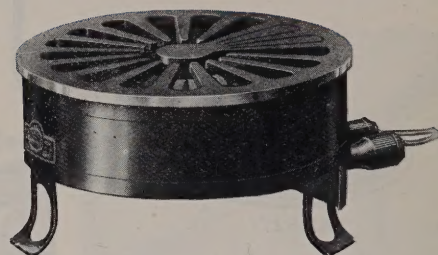
.... per set b £0 17 6

SC1836 Anti-Creeping Device, for use in conjunction with electric hot plates, when evaporating off liquids which are given to creeping. This device consists of a series of ring burners, the jets of which are caused to play around the rims of the platinum basins which are placed on the hot plate. The advantages are as follows: (a) Creep is prevented; (b) evaporation is accelerated; (c) a platinum basin half size can be used in view of (a) and (b). Burners mounted on foot as shown in illustration.

	1	2	4	6 burners.
Price	b 18/6	b 35/-	b 60/-	b 80/-



SC1840



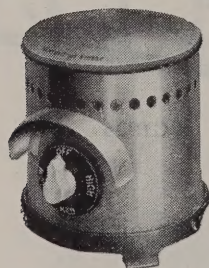
SC1846

ELECTRIC HOT PLATES.

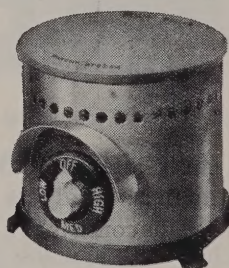
SC1840	Hot Plate, as illustrated, with open type top grid, 8 in. diam., complete with 3-heat switch and 2 yards flex, body of steel, stove enamel black finish, nickel-plated top, 1320, 660, 330 watts	....	....	....	....	....	....	....	d £2 2 0
SC1842	Hot Plate, as above, but with solid disc top	....	....	....	....	....	....	....	d £2 5 0
SC1844	Spare Heating Spirals, two per set, each 660 watts	....	each £0 3 6	;	per set	d £0 7 0			
SC1846	Hot Plates, as illustrated, stove black enamel finish, with polished rim, consumption 1000 watts, diameter 7½ in.	....	....	....	....	....	....	....	d £1 2 6
SC1848	Spare Heating Spiral (single heat)	....	....	....	....	....	....	....	d £0 4 6
SC1849	Hot Plates, with 3-heat control switch, stove black enamel finish, nickel-plated top, consumption 1000, 500, or 200 watts, diameter 7½ in., complete with 2 yards flex	....	....	....	....	....	....	....	d £1 16 0
SC1850	Spare Heating Spirals	....	....	....	....	....	per pair	d £0 5 0	

Spare Plug and Flex for all above, d 1/6 each extra.

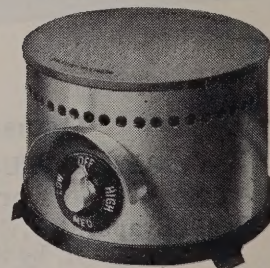
Please state voltage when ordering.



SC1854



SC1856



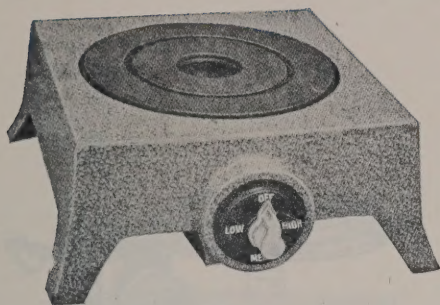
SC1858

Electric Hot Plates. These boiling rings are a new enclosed type, and owing to the special design of the top plate they are even more efficient than the majority of open-type boilers. In addition, of course, it is impossible to spill anything on the heating element, or, in fact, to damage it in any way whatever.

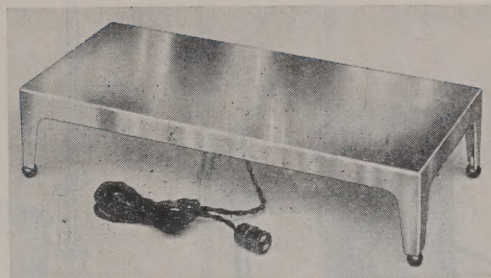
Finish: Black with enamelled band.

These three Boiling Rings are each fitted with a 3-heat switch, so that the current consumption can be reduced to half or quarter for simmering and other purposes.

	Consumption per hour.		Dimensions.		Price.
SC1854	1, ½, or ¼ unit.	....	6½ in. diam. × 6¼ in. high.	....	d £2 8 0
SC1856	1¼, ¾, or ⅓ unit.	....	7¼ in. diam. × 6¼ in. high	....	d £2 12 0
SC1858	2, 1, or ½ unit.	....	9 in. diam. × 6½ in. high	....	d £3 0 0



SC1860



SC1862

SC1860 Boiling Plates, the very latest design, fitted with totally enclosed Chromalox element rings mounted in strong cast-iron base, and being finished in vitreous enamel are easy to clean. The elements are sheathed in high quality chromium steel, with depending edges on the outside which gives them great mechanical strength and renders them practically immune from damage by utensils or spilt liquids.

A very high initial heating speed has been achieved with these elements without in any way overloading the elements, which do not at any time reach an excessive temperature. Fitted with series parallel switch giving three heats of 650, 1100 and 1750 watts.

Complete as illustrated, 13 in. x 13 in., in mottled grey vitreous enamel each £3 15 0

Please state voltage of electricity supply.

SC1862 B.T.L. Electric Hot Plates, 18 in. x 8 in., chromium plated. Loading 285 watts. Surface temperature 102° C.

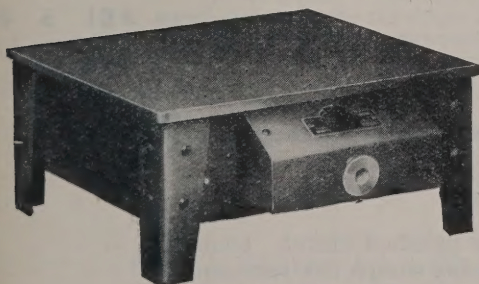
A. For use on 100-110 volt circuits. B. For use on 200-230 volt circuits.

Price each d £3 0 0
or in lots of 1 dozen, ,, d £2 14 0

SC1863 Spare Heaters for above ,, c £0 3 6

SC1864 Hot Plates, as SC1862 but gas heated, B.T.L. manufacture, with rectangular smooth-planed tops, made of cast mild steel, with burner.

Size 12 x 10 16 x 10 18 x 12 21 x 14 24 x 12 24 x 18 in.
Price d £2 10 0 d £3 5 0 d £4 5 0 d £5 2 6 d £5 10 0 d £7 10 0 each



SC1868

Electric Hot Plates, with cast-iron top ground bright and steel body, finished stove black enamel. Suitable for high voltages and arranged for 3-heat control. Standard sizes for any voltage up to 650.

SC1868 Hot Plate, size of top, 9 x 8 in., 1000 watts d £2 12 0

SC1869 Hot Plate, ,, ,, 12 x 8 ,, 1500 ,, d £3 10 0

SC1870 Hot Plate, ,, ,, 18 x 12 ,, 2660 ,, d £5 5 0

Spare Elements :—

SC1871 (4 per set) for SC1868
per set £0 18 0 ; each d £0 4 6

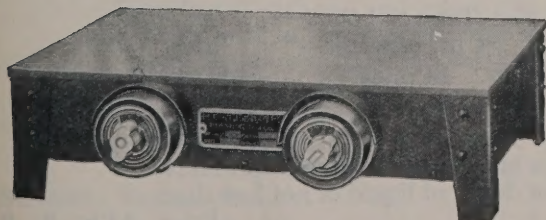
SC1872 (4 per set) ,, SC1869
per set £0 18 0 ; ,, d £0 4 6

SC1873 (8 per set) ,, SC1870
per set £2 2 0 ; ,, d £0 6 0

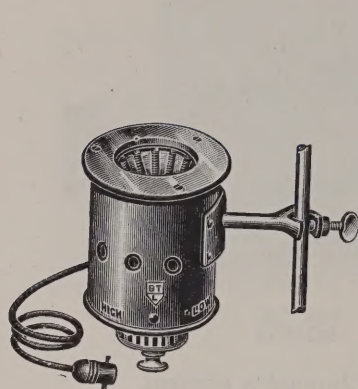
SC1874 Electric Hot Plates, as above, but with control switches added, 9 x 8 in. d £3 5 0

SC1875 ,, ,, ,, 12 x 8 ,, d £4 5 0

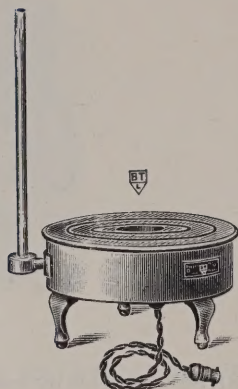
SC1876 ,, ,, ,, 18 x 12 ,, d £6 12 0



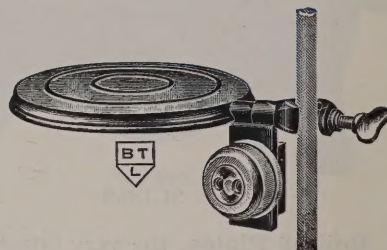
SC1876



SC1877



SC1879



SC1881

SC1877 **Electric Flask Heater**, fitted with bosshead for securing to any size retort rod, having an opening diameter of $2\frac{1}{2}$ in., embodying a rheostat for regulating the heat. Maximum consumption 250 watts. Price, complete with flexible lead and lamp adapter d £2 15 0

SC1878 **Spare Heaters** for above d £1 2 6

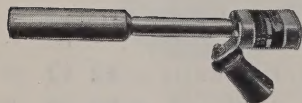
SC1879 **Electric Heater**, suitable either as a hot plate or for heating flasks, body of heater 8 in. diameter, made of spun aluminium, containing special fireclay heater wound with high grade nickel chrome wire. The top is made of fireclay rings, allowing for various size openings from $1\frac{1}{4}$ –6 in. diameter. The heater is mounted on three insulated aluminium feet, and has a vertical rod 12 in. long $\times$ $\frac{3}{8}$ in. diameter, suitable for supporting flasks. Current consumption, 600 watts. Price, complete with 6 ft. flex and lamp adapter, each b £1 15 0

SC1880 **Spare Heaters** for above b £0 8 0

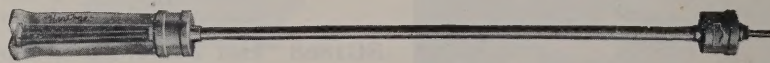
Please state voltage when ordering.

SC1881 **Electric Hot Plate**, with clamp for attaching to any retort stand.

A. For 200–220 volts A.C. or D.C. ....	.....	.....	.....	.....	.....	d £1 5 0
B. For 100–110 volts A.C. or D.C. ....	.....	.....	.....	.....	.....	d £1 5 0
C. Lead 30 in. long with plug for A. or B. ....	.....	.....	.....	.....	.....	d £0 5 0
D. Regulating rheostat to regulate at $\frac{1}{2}$ heat ....	.....	.....	.....	.....	.....	d £1 5 0



SC1882-SC1884



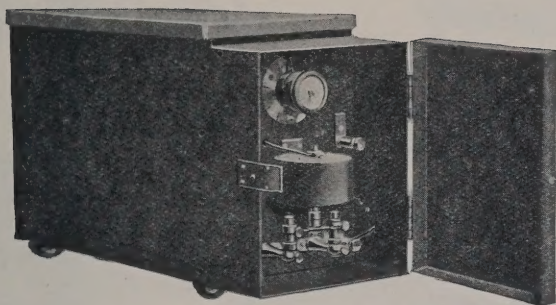
SC1885

Immersion Heaters of copper and brass, finished in highly polished nickel. Quickly heats any liquid into which it is placed. The heating unit being completely surrounded by the liquid, the maximum heat and efficiency is obtained. The heaters are made in two sizes and are equipped complete with connecter, flexible cord and adapter.

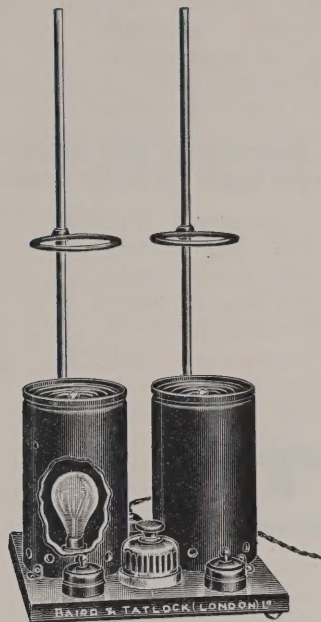
		Size.		Watts.	Time to boil 1 pt. of water.	Price.
		Dia.	Long.			
SC1882	....	$\frac{3}{4}$ in.	7 in.	300	14 mins.	d £1 1 0
SC1884	....	1 "	10 "	500	8 "	d £1 7 0

SC1885 **Immersion Heaters**, large size, for warming oil or water in large tanks, stems up to 6 ft. long, fitted with screwed-up terminal box. Suitable for depth of liquid of not less than 18 in. Price d £6 0 0

When ordering please state voltage and whether required for heating oil or water.



SC1886



SC1889

SC1886 Hot Plate, Maclaren's Patent Controlled Hot Plate having a range of over 20° C., instantaneously adjusted to the required temperature. The case is of sheet-iron and the plate of copper.

The Maclaren Control Thermometer follows very closely the construction of the ordinary mercury thermometer. At the top of the tube of the thermometer there is let in a specially-ground platinum electrode. An inert gas fills the remainder of the tube above the mercury meniscus. To the bulb carrying the mercury for expansion there is fitted an extension carrying a cylinder and piston; the latter, operated by a thumbscrew over a graduated dial, will give any predetermined control point by altering the length of the mercury column.

The relay is of simple construction. It consists of an ironclad stopped solenoid, operating a bridge carbon brake, the whole forming a gravity switch. A condenser is introduced across the solenoid of the relay to prevent any deterioration of the elements in the tube.

The operation of the control thermometer and the relay is as follows: When the temperature surrounding the bulb rises or falls the mercury expands or contracts, and so makes or breaks the relay circuit which operates on the main circuit, thus keeping the temperature of the copper plate absolutely uniform and constant.

The air pocket is electrically heated and automatically controlled by the thermometer, which, as stated above, can, by the simple movement of a thumbscrew, be set to work at any desired temperature within the range of the apparatus.

Size.	Dimensions of Hot Plate proper.	Price, each.
1	10 × 5 in.	£ 9 10 0
2	22 × 5 "	£ 12 0 0
3	34 × 5 "	£ 15 0 0

Electric Heaters for boiling flasks, containing benzene, alcohol or other inflammable liquid.

These heaters consist of a vertical metal cylinder lined with asbestos and mounted on board with rod and retort ring for holding the flask. The tops of the cylinders are fitted with set of copper rings so as to provide different size apertures. Heating is provided by electric lamp bulbs, enabling the inflammable liquid to be brought to boiling point in perfect safety.

Each heater is provided with separate switch, and a rheostat is provided for controlling the degree of heat. Complete with lamps and flexible cord and earthing wire for connecting to wall-plug.

SC1888	For one flask	....	....	....	....	....	....	....	£ 2 16 0
SC1889	For two flasks	....	....	....	....	....	....	....	£ 3 13 6
SC1890	For three flasks	....	....	....	....	....	....	....	£ 4 10 0

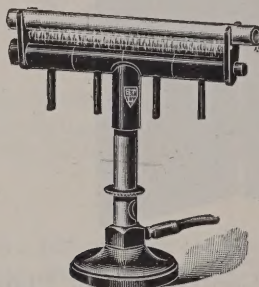
SECTION II h.
Furnaces.

We manufacture and supply furnaces for heating by means of **gas, oil, electricity** and make special furnaces for use in particular branches of science, *e.g.* Coal Carbonisation Furnaces, etc.

(A) GAS HEATED.



SC1900



SC1903-SC1904



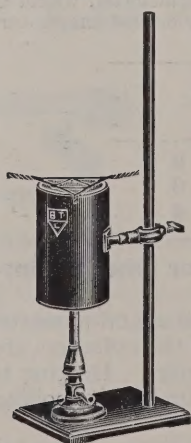
SC1906

SC1900	Tube Furnace, for attaching to $\frac{7}{16}$ in. Bunsen burners	....	....	....	each	f £0 3 0
SC1903	Furnace, for heating tubes, designed by the late Professor Sir W. Ramsay, about 7 in. long, with aperture $\frac{1}{16}$ in. at top, which can be closed by sliding covers, without burner	....	....	....	b	£0 15 0
SC1904	Furnace, as above, with Bunsen burner, $\frac{3}{4}$ in.	....	....	....	b	£1 0 0
SC1906	Crucible Furnace, Vitreosil, for use with Bunsen burner. 4 in. high $\times$ 2 in. outside diameter.	....	....	....		

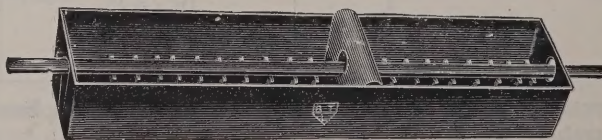
Price (furnace only, height 4 inches) $\frac{3}{4}$ each.

Crucible and burner not included.

These furnaces afford a convenient and efficient support for small crucibles; and being, in common with other VITREOSIL products, heat and acid proof, are practically indestructible, conserve the heat, and direct it entirely on to the crucible.

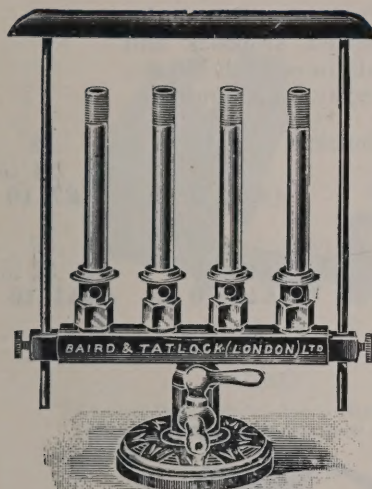


SC1907-SC1908

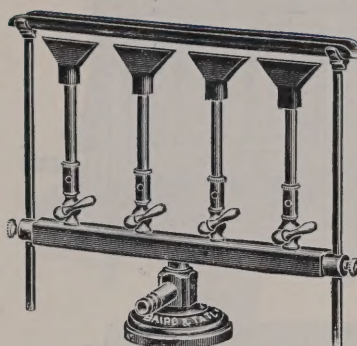


SC1909

SC1907	Simple Furnace, consisting of Teclu burner, stand, nichrome wire triangle, and adjustable asbestos-lined hood	....	....	....	....	d £0 15 6
SC1908	Furnace, as above, but with platinum wire triangle enclosed in iron	....	....	....	....	d £1 5 0
SC1909	Furnaces, Liebig's, sheet-iron, for charcoal, 24 in.	....	....	....	....	d £0 9 0



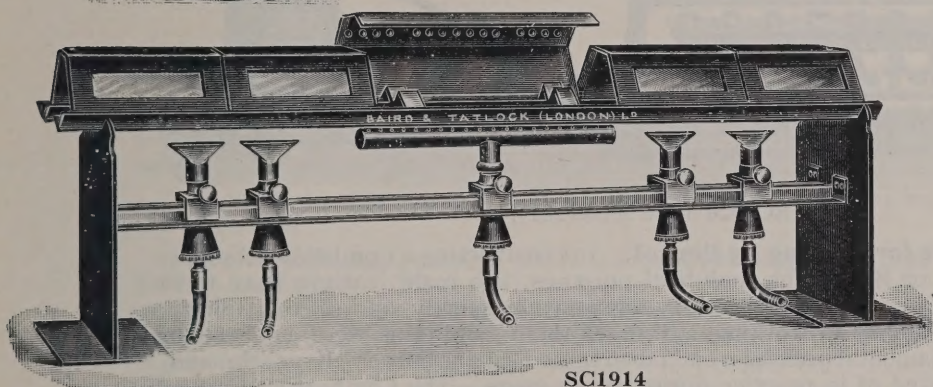
SC1910



SC1912

SC1910 Furnace for Heating Tubes, consisting of four $\frac{1}{2}$ in. Bunsen burners with regulators, on stand, and adjustable sliding support to hold tubes *d* £1 5 0.

SC1912 Furnace, as above, but with each burner provided with tap and flame spreader *d* £1 10 0

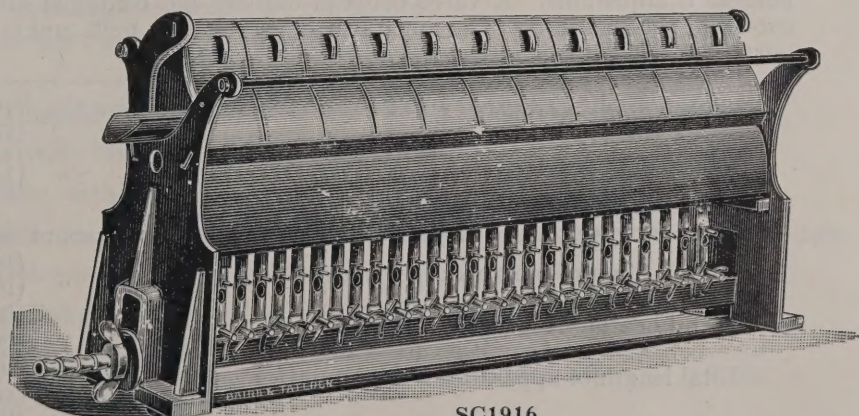


SC1914

SC1914 Furnace, Combustion, consisting of a light wrought-iron framework on which is supported a central long tube burner, and each side there are two spreader burners, all of which are removable and adjustable. The upper portion, containing combustion tube, is covered by angular wrought-iron covers, with mica windows. The length overall is approximately 3 ft.

Complete with iron stand and cross bar, with copper hooks for supporting glass vessels attached to combustion tube *d* £6 2 6

See also Page 262
for Gas Furnace
for Determination
of Carbon
and Hydrogen

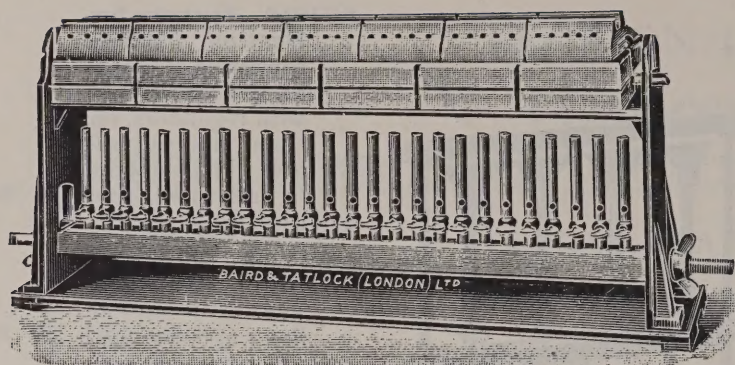


SC1916

SC1916 Furnaces, Erlenmeyer's improved construction, with arrangement for raising and lowering burners. Complete with bricks, etc. Burners fitted with air regulators and lever stopcocks.

No. of burners	12	15	20	25	30	32
Length	12	15	20	24	28	39 in.
Price	 <i>d</i> £7 0 0	<i>d</i> £8 0 0	<i>d</i> £9 0 0	<i>d</i> £10 0 0	<i>d</i> £11 0 0	<i>d</i> £12 10 0

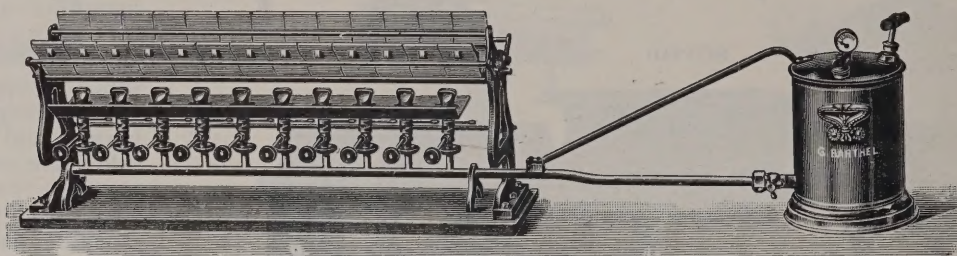
See also Micro-Chemical Section for Micro Furnaces.



SC1918

SC1918 Furnaces, Bunsen's,
well finished, stopcock and
air regulator on each burner,
with fireclay bricks and tiles.

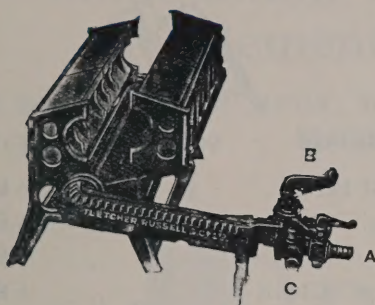
No. of burners	12	18
Length	15	24 in.
Price	d £6 0 0	d £7 10 0
No. of burners	26	30
Length	28	32 in.
Price	d £10 0 0	d £11 10 0

SC1920 ($\frac{1}{16}$ th actual size).

Combustion Furnace for Heating by Benzol. In constructing a Combustion Furnace heated by Benzine or Benzol for analytical purposes, two main features have to be borne in mind: (1) to obtain the necessary temperature quickly, and (2) to attain the utmost possible reliability in working. Both of these conditions were achieved by adhering to the fundamental principles embodied in the Benzine burner "Kryolithmano," and so much approved of in practice during many years. The Combustion Furnace "Olivin," illustrated above, is the outcome of this experience. For a better control of the pressure the container is fitted with a manometer. The container is placed so far from the burner that it cannot be influenced through radiated heat. Each of the burners is adjustable. A valve between burners and container allows an immediate cut-off of the fuel feed. The apparatus is very solidly built and is well suited to the purpose for which it is intended.

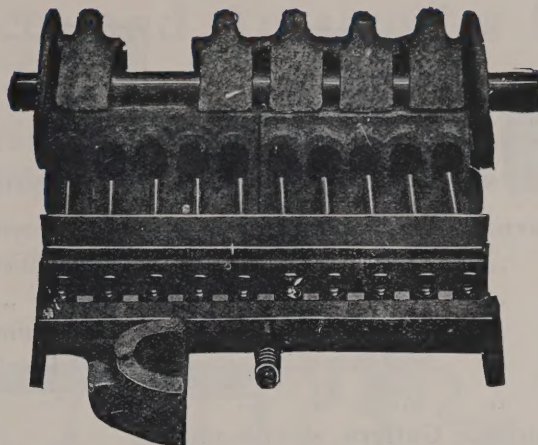
Capacity of container	....	....	....	....	about	{ pints ltr.	12 $\frac{1}{8}$ 7
Fill up only with	....	....	....	....	"	{ pints ltr.	8 $\frac{4}{5}$ 5
One filling, using the ten burners simultaneously and applying a pressure of $\frac{1}{2}$ atm., burns	....	....	....	....	about	hours	3 $\frac{1}{2}$
Consumption of fuel, max. per hour	....	....	....	....	"	{ pints ltr.	12 $\frac{1}{8}$ 7
Useful heating length	....	....	....	....	"	{ inch cm.	33 $\frac{1}{8}$ 85
Total length of apparatus	....	....	....	....	"	{ inch cm.	64 $\frac{1}{8}$ 165
Weight of the ten burners and container	....	....	....	....	"	{ lbs. kg.	28 12.7
Weight of twelve pairs of tiles	....	....	....	....	"	{ lbs. kg.	8 $\frac{4}{5}$ 4
Weight of iron frame	....	....	....	....	"	{ lbs. kg.	36 $\frac{1}{8}$ 16.5
Total length of furnace	....	....	....	....	"	{ ins.	33

*SC1920 Price of furnace complete, with ten burners and twelve pairs of tiles d £24 0 0
Ex Works Price for Export only RM 260-00



SC1922

The engraving shows the furnace open ready for the introduction of a tube.



SC1930

Furnaces for Heating Tubes, Fletcher Russell No. 1 pattern.

This will heat an iron tube of $\frac{3}{4}$ to 1 in. diameter to its softening point in ten minutes, using a small foot blower; or it will heat the same tube to redness without a blast, the same burner being applicable for either draught or blast.

To use a draught furnace, connect the tap (A) with the gas supply, closing both the other taps.

As a blast furnace, connect (B) to a second gas supply full $\frac{1}{2}$ -in. bore and connect (C) to a foot blower. When the blast is applied the tap (A) must be closed and the gas supplied only from (B). In the pattern with adjustable length of flame, at the side of (A) is a screw plug which adjusts the area of the gas jet without affecting the pressure of gas. The gas supply when used without a foot blower must be adjusted by this plug only and not with the tap, which must be full on. This plug adjusts the gas supply for varying lengths of flame, the length of the flame being altered by a sliding plug in the tube. On the end of the rod carrying the sliding plug is a tap which can be connected to an air supply for the purpose of cooling the part of the tube not exposed to the flame, preventing the heat spreading too rapidly by conduction.

The above can be used with air gas or coal gas.

		12	18	24 in.
SC1922	For draught or blast, with adjustable length of flame	d 110/-	d 115/6	d 138/6
SC1924	As above, without adjustable length of flame	 d 96/-	d 103/-	d 110/-
SC1926	With fixed length of flame, without blast	 d 69/-	d 85/6	d 92/-
SC1928	Extra fireclay blocks, 6 in. long	....	....	each d £0 1 8

The foot blower No. 3, Fig. SC648, is the best for this furnace.

SC1930 Furnace for Heating Tubes, Fletcher Russell No. 2 pattern.

The furnace body is in 6-in. sections, and can be made up to any length without any obstruction, such as occurs when a long Hoffman furnace is used with a short tube. It will take tubes 1 in. external diameter.

The burners can be made any length, and any part of them used. The blocks and covers are sold separately, and the burners can be supplied in sections of 6, 12, 18, 24, and 36 in., so that any number can be used in a line without a break, enabling the furnace to be at once built up to any length required.

	Length	12	18	24	36 in.
	Price	d £5 10 0	d £8 5 0	d £11 0 0	d £16 10 0
SC1931	Tiles for above	....	....	....	per doz. d £0 16 0



SC1932



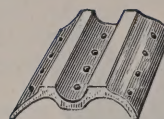
SC1933



SC1934



SC1935



SC1936



SC1937

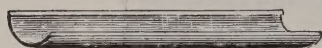
SC1932	Furnace Tiles, finest fireclay, side, for Bunsen's furnace, SC1918	....	per doz.	b £0 5 0
SC1933	„ „ „ „ side, „ Hoffmann's furnace	....	„	b £0 6 0
SC1934	„ „ „ „ top, „ „ „	....	„	b £0 6 6
SC1935	„ „ „ „ „ Erlenmeyer's furnace, SC1916	....	„	b £0 8 0
SC1936	„ „ „ „ top, „ Glaser's furnace	....	„	b £0 12 0
SC1937	„ „ „ „ side, „ „ „	....	„	b £0 6 6

SC1938 Furnace Gutters, sheet-iron.

Length	....	18	28	32 in.
Price	....	b 1/-	b 1/6	b 1/9 each.

SC1940 Furnace Gutters, of pure nickel, 25 millimetres wide and about 1 millimetre thick.

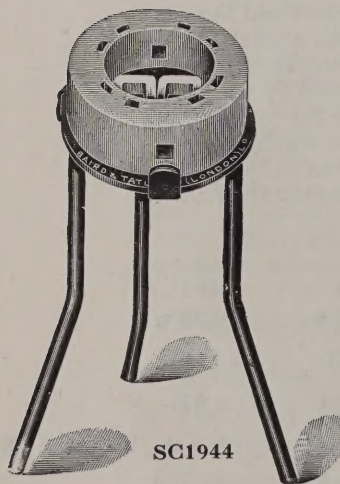
Length	20	60	80	90 cm.
Price	b 4/6	b 7/6	b 10/6	b 12/- each.



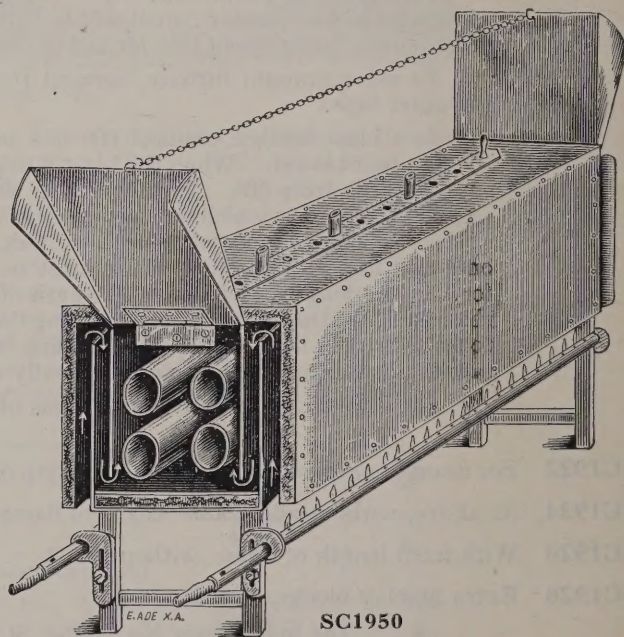
SC1942



SC1946-SC1948



SC1944



SC1950

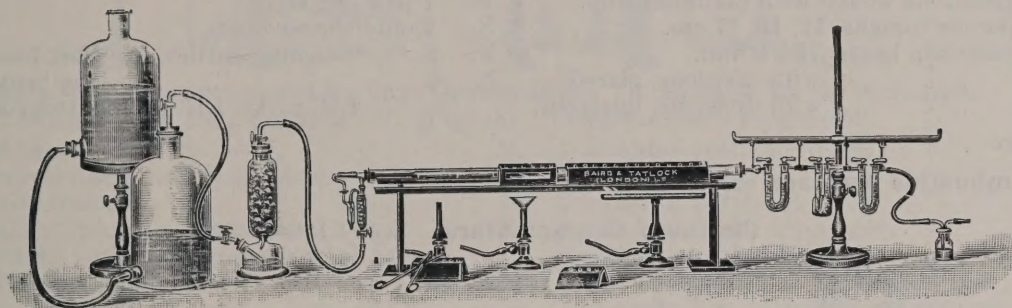
SC1942	Clay Troughs, for tubes, 7 x 1 in.	....	per doz.	d £0 10 6
SC1944	Fireclay Trough, double, with fireclay moulds fitted inside for melting small quantities of easily fusible metals, etc., on stand	....	each	d £0 8 6
	Extra fireclay trays, per doz.	d 5/-		
SC1946	Fireclay Burners, for Hoffmann's furnace, large	....	per doz.	d £1 1 0
SC1948	Fireclay Burners, „ „ „ small	....	„	d £0 18 6
SC1950	Furnace, for sealed tube operations, Lothar Meyer's, with strong sheet-iron insulated cover, double air space, and inner tubes, 2-tube Bunsen burners, as illustrated.			
	For	4	8 tubes.	
	Price	d £9 5 0	d £12 10 0	

For Assay Furnaces, for use with coke, wood, and petroleum, see Assay Section VIII.

Electric Furnaces, see pages 260 *et seq.*

Combustion Furnaces and Accessories for Elementary Chemical Analysis.

AS DESCRIBED BY PROF. M. DENNSTEDT IN "ANLEITUNG ZUR VEREINFACHTEN
ELEMENTARANALYSE," Fourth Edition.



SC1960

SC1960 Furnace, single tube type, with fittings, designed by Prof. Dennstedt (Fig. 13). Complete outfit comprising :

- | | |
|--|--|
| A. 1 combustion furnace with covers (see SC1961). | N. 1 only porcelain boats, with divisions, glazed. |
| B. 2 only Teclu burners with flame spreaders. | O. 1 " " " with divisions, unglazed. |
| C. 1 " Bunsen burner with T-shape headpiece. | P. 2 " " " 145 x 14 mm. |
| *D. 1 " soda lime apparatus. | Q. 1 " copper boat. |
| E. 2 " " U-tubes. | R. 1 " weighing bottle, for short boats. |
| F. 1 " CaCl ₂ U-tube with small stopper in side tube. | S. 1 " " for long boats. |
| G. 1 " stand with rod and 4 hooks. | T. 1 " palladium chloride bottle. |
| H. 1 " oxygen admission apparatus. | U. 1 " nitrometer. |
| I. 2 " combustion tubes. | V. 1 " Bunsen's valve. |
| J. 2 each inner tubes, 11, 13, 17 cm. | *W. 1 " drying tower. |
| K. 1 only glass rod wound with platinum wire. | X. 2 " aspirator bottles, 5 litre. |
| L. 2 each porous troughs, 11, 13, 17 cm. | Y. 1 " stand for do., adjustable. |
| M. 2 only porcelain boats, 75 x 9 mm. | Z. 1 pair of tongs, iron bow 8 in. |

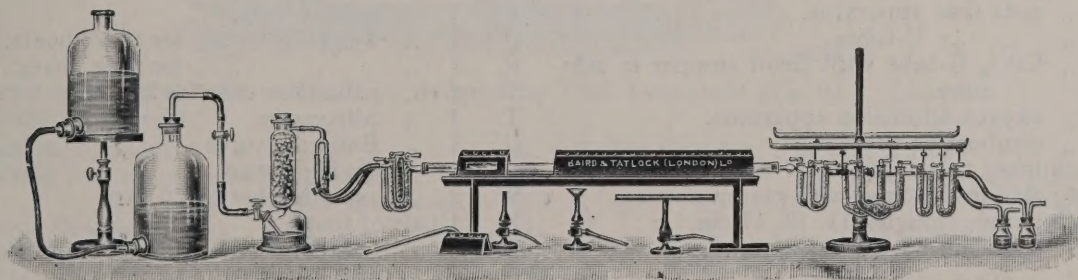
I.R. corks, I.R. tubing, stopcocks, etc.

Price e £13 0 0

SC1961 Combustion Furnace only, as above e £1 14 0

SC1962 Outfit, as above, but with two Bunsen burners for spirit in place of the gas burners e £14 10 0

SC1964 Platinum Contact Stars, for use with above combustion furnaces (price variable)
each approx. e £2 10 0



SC1966

SC1966 Furnace, double tube type, with fittings designed by Prof. Dennstedt (Fig. 17), especially suitable for coal combustion. Complete apparatus comprising :

- | | |
|---|---|
| A. 1 only double combustion furnace (see SC1967). | D. 2 only Teclu burners with flame spreaders, soles cut so that the burners can stand closely side by side. |
| B. 1 " Bunsen burner with T shape headpiece. | |
| C. 1 " " " with flame spreader. | |

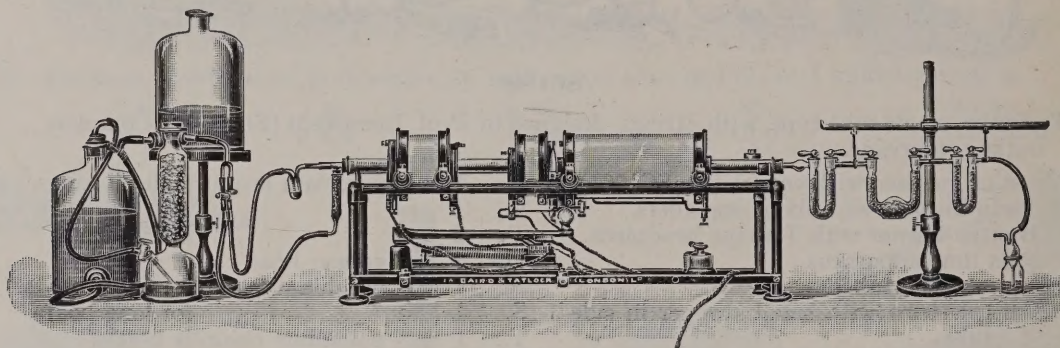
(List continued over page)

- | | |
|---|---|
| *E. 2 only soda lime apparatus. | P. 4 only porcelain boats, 145 × 14 mm. |
| F. 4 " " U tubes. | Q. 2 " palladium chloride bottles. |
| G. 2 " CaCl ₂ U tubes with small stopper in side tube. | R. 1 " nitrometer. |
| H. 1 " stand with 2 rods and 8 hooks. | S. 1 " Bunsen's valve. |
| I. 4 " combustion tubes. | *T. 1 " drying tower. |
| J. 2 each inner tubes, 11, 13, 17 cm. | U. 2 " aspirator bottles, 5 litre. |
| K. 2 only glass rods wound with platinum wire. | V. 1 " stand for do., adjustable. |
| L. 2 each porous troughs, 11, 13, 17 cm. | W. 1 pair of tongs. |
| M. 4 only porcelain boats, 75 × 9 mm. | X. 2 only copper boats. |
| N. 2 " " " with divisions, glazed. | Y. 2 " weighing bottles, for short boats. |
| O. 2 " " " with divisions, unglazed. | Z. 2 " " " for long boats. |
| | I.R. corks, I.R. tubing, stopcocks, etc. |

Price e £18 5 0

SC1967 Combustion Furnace only, as above e £2 0 0

Platinum Contact Stars. See SC1964.



SC1968

SC1968 Furnace, single tube type, with fittings designed by Prof. Dennstedt (Fig. 16), arranged for electric heating. The furnace is wound with nichrome wire and built in three sections, each provided with rollers for movement along the rails to the required position. The front and middle sections are coupled together and wound to maintain the correct temperature without external resistance, whilst the temperature of the rear section is controlled by means of a regulating rheostat. Maximum working temperature 1000° C. Complete as below with Furnace and Resistance e £30 10 0

The complete outfit comprises :

- | | |
|--|---|
| A. 1 only electric combustion furnace (see SC1970). | M. 1 only porcelain boat, with divisions, glazed. |
| B. 1 " stand with rod and 4 hooks. | N. 1 " " " with divisions, unglazed. |
| C. 1 " " for aspirator bottles, adjustable. | O. 2 " " " 145 × 14 mm. |
| *D. 1 " soda lime apparatus. | P. 1 " copper boat. |
| E. 2 " " U-tubes. | Q. 1 " weighing bottle, for short boats. |
| F. 1 " CaCl ₂ U-tube with small stopper in side tube. | R. 1 " " " for long boats. |
| G. 1 " oxygen admission apparatus. | S. 1 " palladium chloride bottle. |
| H. 2 " combustion tubes. | T. 1 " nitrometer. |
| I. 2 each inner tubes, 11, 13, 17 cm. | U. 1 " Bunsen's valve. |
| J. 1 only glass rod wound with platinum wire. | *V. 1 " drying tower. |
| K. 2 each porous troughs, 11, 13, 17 cm. | W. 2 " aspirator bottles, 5 litre. |
| L. 2 only porcelain boats, 75 × 9 mm. | X. 1 pair of tongs. |
| | Y. I.R. corks, I.R. tubing, stopcocks, etc. |

Please state voltage when ordering.

SC1970 Furnace and Resistance only, as illustrated above e £22 0 0

SC1971 Spare Heaters for above : 8 cm. section—wattage 270 Price e £0 12 9

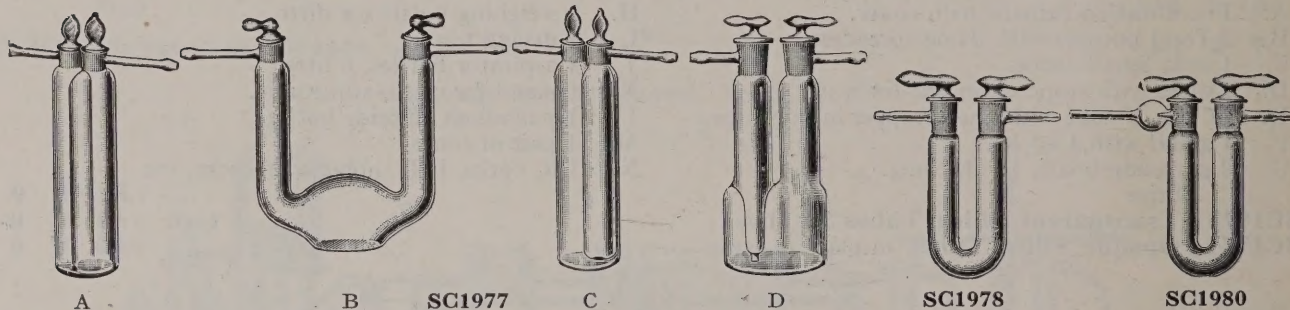
15 " " " 330 " e £0 19 6

38 " " " 100 " e £1 18 6

Please state voltage when ordering.

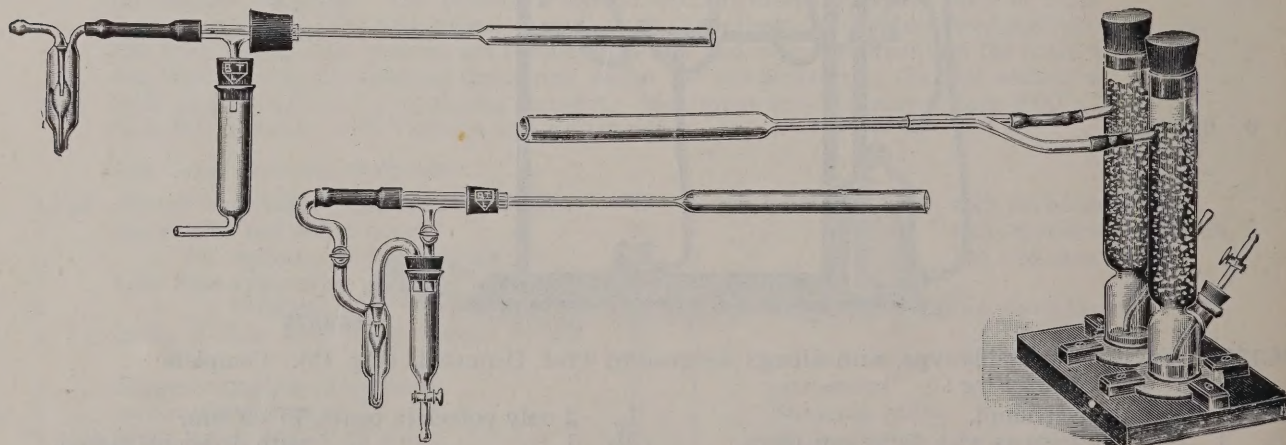
The Furnace, etc. described under Cat. No. SC1975 can easily be adapted for the Determination of Nitrogen by Dumas' method. The following additional items are required :

SC1976	A.	1 combustion tube, 30 cm. long, closed one end, with I.R. cork	....	....	....	£0	2	0
	B.	1 copper boat	....	....	....	£0	3	6
	C.	1 piece of copper gauze	....	....	....	£0	1	0
	D.	1 micro burner with support	....	....	....	£0	10	6
	E.	1 clamp with bosshead	....	....	....	£0	5	0
	F.	1 nitrometer with Bunsen's valve	....	....	....	£1	9	6
	G.	Iron screen, asbestos covered, with clamp to fix to framework of stand	....	....	....	£0	8	6
Price of the additional items						£3	0	0



*SC1977 Soda Lime Apparatus, after Dennstedt-Klunder, entirely of glass, with ground stoppers.

		A	B	C	D			
	Price	....	....	....	....	....	....	....
		d 12/3	d 12/6	d 12/6	d 12/6 each.			
SC1978	Soda Lime U-tube, with ground-in glass stoppers	....	....	....	....	d £0	3	9
SC1980	Calcium Chloride U-tube, with ground-in glass stoppers and trap	....	....	....	....	d £0	5	6
SC1982	Calcium Chloride U-tube, as above, but with a small stopper ground in one side tube	....	....	....	....	d £0	6	0



	SC1984		SC1986		SC1988			
SC1984	Apparatus for regulating the admission of oxygen	....	....	....	....	d £0	17	0
SC1986	Apparatus for regulating the admission of oxygen, improved form, fitted with three stopcocks	....	....	....	....	d £1	1	0
*SC1988	Apparatus for regulating the admission of oxygen, with two drying cylinders	....	....	....	....	d £1	17	6
SC1990	Combustion Tubes, 86 centimetres long by 16-18 millimetres internal diameter, open both ends	....	....	....	....	d £0	2	6
SC1992	Combustion Tubes, 30 centimetres long by 16-18 millimetres internal diameter, closed at one end	....	....	....	....	d £0	1	6



SC1994

*SC1994 Tubes, Inner, 14 millimetres diameter, open both ends.

Length	....	....	....	15	18	21 cm.
Price	....	....	....	d 2/-	d 2/1	d 2/3 each.



SC1996

SC2003

SC1996 Tubes, Inner, 14 millimetres diameter, with one end closed and fitted with hook.

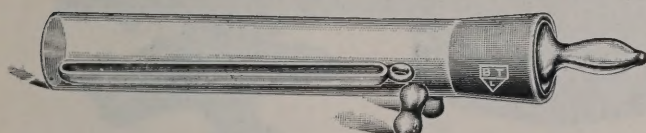
Length	....	....	....	11	13	17 cm.
Price	....	....	....	d 9d.	d 10d.	d 1/- each.

SC1998 Troughs, Porous.

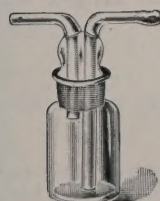
Length	....	....	....	11	13	17 cm.
Price	....	....	....	d 9d.	d 10d.	d 1/- each.

SC2000	Combustion Boat, porcelain, 75 x 9 millimetres	....	....	....	....	d £0 1 0
SC2002	„ „ „ 145 x 14 „	....	....	....	....	d £0 3 0
SC2003	Combustion Boat, with three divisions, 75 x 9 millimetres	....	....	....	....	d £0 3 0
SC2004	Combustion Boat, porous, with three divisions, 75 x 9 millimetres	....	....	....	....	d £0 2 9
SC2005	Combustion Boat, porcelain, 14 centimetres long, open in front, with round bottom for lead peroxide	....	....	....	....	d £0 3 6
SC2006	Combustion Boat, of stout copper, 20 centimetres long, for nitrogen determinations	....	....	....	....	d £0 3 6
SC2007	Rod, of hard glass, with knobs and platinum wire winding	....	....	....	....	d £0 4 0

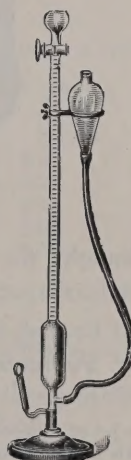
Combustion Boats, Silica. See Section III.



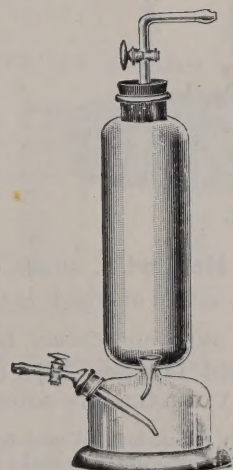
SC2010-SC2011



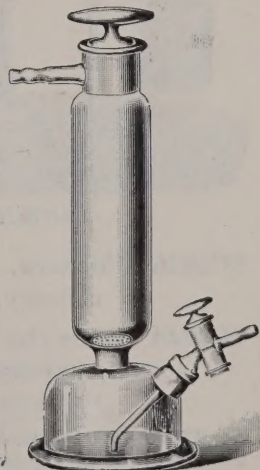
SC2012



SC2014



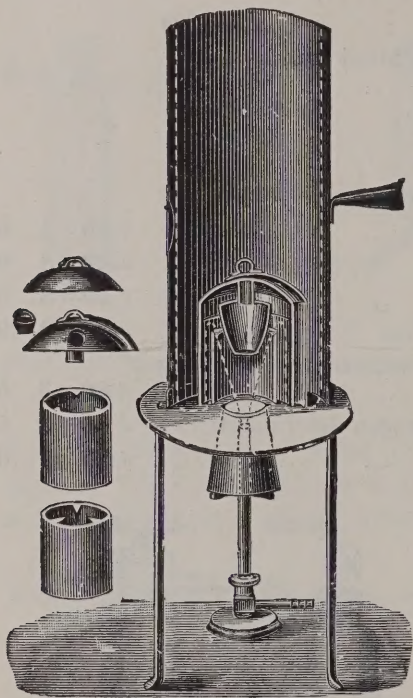
SC2016



SC2017

SC2010	Weighing Tube, for short boats, with support and stopper ground to fit	....	....	d £0 1 6
SC2011	Weighing Tube, as above, to take combustion boats 15 centimetres long	....	....	d £0 2 0
SC2012	Wash Bottle, for palladium chloride, with ground-in stopper	....	....	d £0 3 0
SC2013	Schiffs' Nitrometer, with reservoir, ordinary pattern	....	....	d £1 1 0
SC2014	Schiffs' Nitrometer, modified by Prof. Dennstedt, complete with ring, etc., as figured	....	....	d £1 7 6
SC2015	Bunsen's Valve, to use with above	....	....	d £0 2 0
*SC2016	Drying Tower, Dennstedt's, with ground-in tube with stopcock, rubber stopper and tube with stopcock	....	....	d £1 1 0
*SC2017	Drying Tower, as above, but with ground-in stopper at top and porcelain perforated disc	....	....	d £1 1 0

SC2018	Aspirator Bottle, 5-litre capacity, with tubulure	....	....	....	....	d £0 6 0
SC2020	Double Forked Tube Glass, for use with the double furnace, No. SC1966	....	....	....	....	d £0 0 9
SC2021	Table Support, brass pillar and base with adjustable polished wood table, for 5-litre aspirator	....	....	....	....	d £0 15 0
SC2022	Tongs for removing the iron covers	....	....	....	....	d £0 1 0
SC2023	Stand for carrying the absorption apparatus, consisting of tripod foot with lacquered iron rod, $12 \times \frac{3}{8}$, with 8 hooks	....	....	....	....	d £0 15 0
SC2024	Stand, as above, with 4 hooks	....	....	....	....	d £0 10 0



SC2026



SC2030-SC2031

SC2026	Furnace, Hempel's, small draught for crucibles, consisting of tripod with metal chimney, inside of which is the fireclay cylinder with cover	 Price with burner	d £1 17 6
SC2028	Extra clay parts and covers, best English fireclay	 per set	d £1 4 0

Compressed Oxygen Injector Furnace. For the rapid fusion of metals and the treatment of refractory substances at all temperatures.

This furnace is entirely self-acting. A very fine jet of compressed oxygen is first mixed with air, then with coal gas, the pressure of the oxygen being utilised to make this mixture and blow it into the furnace chamber at a high speed.

The quantity of oxygen used depends on the temperature and speed of working required, but under any circumstances is very small for the work done; and owing to the very large proportion of air used with the oxygen, there is no tendency to local heating or perforation of the crucible. The temperature is under the most perfect control from a red-heat to the almost instantaneous fusion of the most refractory metals.

The heat remains perfectly steady without any attention; one oxygen cylinder 2 ft. long and 6 in. diameter will work the furnace for several hours without any attendance whatever.

The furnace casings are the ordinary well-known injector pattern, but are lined with a special refractory material to resist the very high temperatures, which are obtained with the greatest ease. The burner is of the simplest possible construction, and is not liable to damage or to get out of order. We cannot guarantee any casing against fusion if the furnace is worked at its maximum power. The price of extra furnace bodies is d 10/6; extra lid, d 5/6.

PRICES.

SC2030	Furnace and burner to take Morgan's No. 00 crucibles, capacity $\frac{1}{2}$ lb. iron	....	....	d £1 15 6
SC2031	" " " No. 1 " " 2 lbs. "	....	....	d £1 17 6



SC2034

Perfected Injector Furnace, for metallurgists, jewellers, chemists, manufacturers of artificial gems, and other purposes. Works equally well with coal gas or air gas.

POWER AND SPEED OF WORKING.

With $\frac{1}{2}$ in. gas pipe and the smallest foot blower, the smallest furnace will melt a crucible full of cast-iron scrap in 7 minutes; tool steel in 12 minutes, and nickel in 22 minutes, starting with all cold. With a foot blower No. 5 (SC648), cast-iron can be melted in any furnace up to 12-lb. size, tool steel or nickel in any up to the 6-lb. size; Bessemer or gun steel in the smallest size. For higher powers or large furnaces a Lennox (SC656-SC658) blower, driven by power, is necessary, and the air jet must be enlarged to about double the size which can be used with a foot blower.

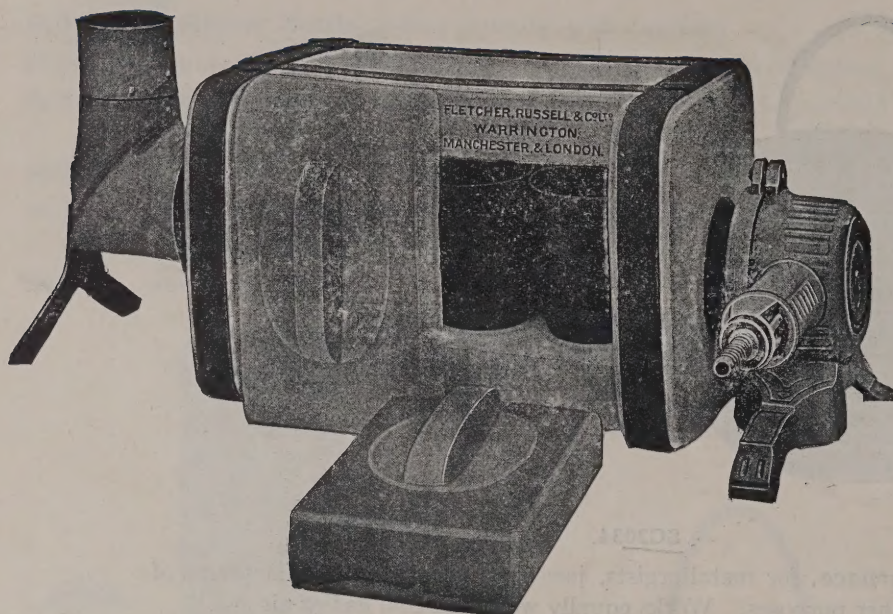
To take crucibles No.		00	1	3	6	14
SC2034	Prices of furnaces	d £1 9 6	d £1 11 6	d £2 19 6	d £3 7 6	d £5 7 6
	Size of crucibles in inches, outside measure	$2\frac{1}{4} \times 2$	$3 \times 2\frac{5}{8}$	$4\frac{1}{4} \times 3\frac{1}{2}$	$6 \times 4\frac{1}{2}$	$8 \times 6\frac{1}{4}$
	Capacity in lbs. iron....	$\frac{1}{3}$	2	6	12	28
SC2035	Foot blower	(No. 3) d 47/6	(No. 3) d 47/6	(No. 5) d 52/6	(No. 5) d 52/6	Power Blower
SC2036	India-rubber tubing	d 8/3	d 8/3	d 10/-	d 10/-	—
SC2037	Prices complete, ready for use with blower and tubing	d 85/3	d 87/9	d 122/-	d 130/-	—
SC2038	Extra furnace bodies	d 12/-	d 13/-	d 25/-	d 32/-	d 57/6
SC2039	Extra furnace lids	d 4/6	d 5/-	d 8/6	d 10/-	d 15/-
SC2040	Crucible tongs	d 2/9	d 2/9	d 4/-	d 4/-	—
SC2041	Bow tongs	—	—	d 8/3	d 10/9	—
SC2042	Crucibles, fireclay doz.	d 4/-	d 6/3	d 13/-	d 26/6	—
SC2043	„ salamander „	d 12/6	d 14/3	d 45/-	d 90/6	—

For the fusion of more than 6 lbs. of pure nickel a small power blower is necessary, and the air jets of the burners must be enlarged to double the size. The air supply of the 28-lb. size must be controlled, if necessary, by a valve or large tap.

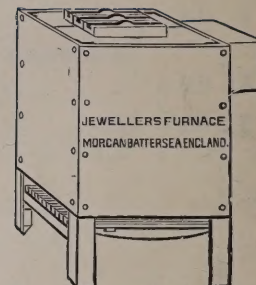
Gas supply required 6 oz. size furnace $\frac{3}{8}$ in. pipe = 7 to 30 ft. of gas per hour.

„	„	2 lb.	„	$\frac{3}{8}$	„	= 10 to 40 ft.	„	„
„	„	6 lb.	„	$\frac{1}{2}$	„	= 25 to 60 ft.	„	„
„	„	12 lb.	„	$\frac{5}{8}$	„	= 30 to 70 ft.	„	„
„	„	28 lb.	„	$1\frac{1}{4}$	„	= 100 to 300 ft.	„	„

All internally fired casings crack the first time they are used, but should not alter afterwards.



SC2044-SC2047



SC2050

Reverberatory Gas Furnaces, for crucibles, muffles, cupels, etc.

	No.	Floor Space in Furnace.	Long.	Wide.	High.	Price of Furnace with Draught Burner for Crucibles and Cupels.	
SC2044	1 H	14 in.	4 in.	4 in.	4 in.	d £9 8 0	Muffle doors and stoppers, d 20/6 each. Burner and plug for blast arrangement, d 29/- extra.
SC2045	23 H	10 "	5 "	5 "	5 "	d £10 10 0	
SC2046	33 H	14 "	5 "	5 "	5 "	d £11 2 6	
SC2047	6 H	14 "	6 "	7½ "	7½ "	d £11 2 6	

1 H will take five 2-lb. crucibles at once, or two muffles about 4 in. wide by 4½ in. long by 2¼ in. high.

23 H " two 6-lb. crucibles, or two muffles 3 × 5¼ × 3½ in.
33 H " three 6-lb. " " 4½ × 5¼ × 3½ in.
6 H " two 12-lb. " " 4 × 7 × 4¼ in.

6 H requires a special burner when used for muffles or cupels; all the others work with the same burner for both purposes. The extra price is d 14/-.

In ordering muffles, say if with perforations for oxidising or plain for enamels and similar work.

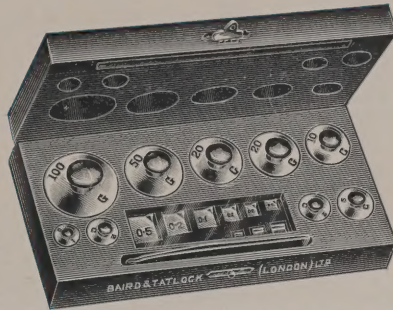
Muffle for	1 H	Clay.	Salamander.	Muffle for	33 H	Clay.	Salamander.
"	23 H	d 4/-	d 7/-	"	6 H	d 4/-	d 7/-
		d 4/-	d 6/3			d 7/3	d 8/3

Morgan's Iron-Cased Jewellers' Furnace, specially designed for precious metals and small work. The firebars are placed lower than the bottom of the firebrick lining of the furnace, and so give an air-passage on each side, in front and at the back of the bars, allowing a current of air to pass equally on all sides; and from the way in which the air is admitted to the fuel, a perfect and regular combustion of the coke takes place, and a high and uniform heat of the required intensity completely surrounds the crucible.

Size of Furnace.	DIMENSIONS.	For Morgan's and Salamander Crucibles. Size.	PRICE.
SC2050 A.	Body, 12 in. square, 22 in. deep, for 6 in. fire	No. 4	d £5 12 6
B.	" 15 " 22 " 7 "	" 6	d £7 10 0
C.	" 18 " 22 " 8 "	" 10	d £10 3 0
D.	" 21 " 22 " 9 "	" 14	d £14 4 6
E.	" 24 " 22 " 10 "	" 20	d £15 0 0

B. T. L.

BAIRD & TATLOCK (LONDON) LTD., 14-17 CROSS ST., HATTON GARDEN, LONDON, ENG.



SC433



SC439

B.T.L. Students' Weights in Moulded Bakelite Cases

Series G. Students' Chemical and Physical Weights, of polished brass, values engraved on knob, fractions of a gramme in nickel and aluminium. Complete in Bakelite case with hinged lid.

SC430	50 grammes to 0.001 gramme	...	...	...	per set	b£0 15 0
SC431	100 " 0.001 "	...	...	...	"	b£0 17 6

MAXIMUM LIMITS OF ERROR.

Nominal Value of Weight.	Series G. SC430, 431.	Nominal Value of Weight.	Series G. SC430, 431.	Nominal Value of Weight.	Series G. SC430, 431.
100 gm.	·005 gm.	1 gm.	·001 gm.	0.01 gm.	·001 gm.
50 "	·004 "	0.5 "	·001 "	Rider	
20 "	·003 "	0.2 "	·001 "	0.01 "	·001 "
10 "	·002 "	0.1 "	·001 "	·005 "	·0005 "
5 "	·0015 "	0.05 "	·001 "	·002 "	·0005 "
2 "	·0015 "	0.02 "	·001 "	·001 "	·0005 "

Series H. Physical Weights, as SC430, but second quality, with values stamped on weights.

SC432	50 grammes to 0.001 gramme	...	...	...	per set	b£0 8 6
SC433	100 " 0.001 "	...	...	...	"	b£0 10 0

Series K. Physical Weights, as SC432, but without fractions of a gramme.

SC434	50 grammes to 1 gramme	...	...	...	per set	b£0 7 0
SC435	100 " 1 "	...	...	...	"	b£0 8 6

Series L. Physical Weights in blocks, with fractions of a gramme in nickel and aluminium.

SC438	50 grammes to 0.001 gramme	...	...	...	per set	b£0 7 3
SC439	100 " 0.001 "	...	...	...	"	b£0 8 3

Series M. Physical Weights, as above, but without fractions of a gramme.

SC440	50 grammes to 1 gramme	...	...	...	per set	b£0 5 9
SC441	100 " 1 "	...	...	...	"	b£0 7 3

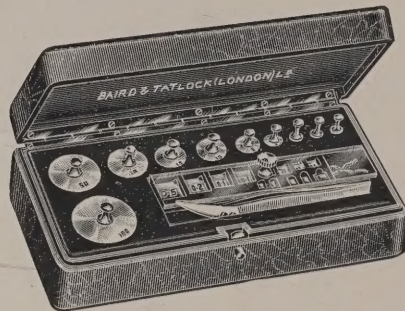
B. T. L.

BAIRD & TATLOCK (LONDON) LTD., 14-17 CROSS ST., HATTON GARDEN, LONDON, ENG.



B.T.L. Standard Weights in Moulded Bakelite Cases

NEW SERIES of British-made weights, in solid moulded, acid proof, Bakelite cases, especially suitable for use in the tropics, as the cases will not shrink or warp. Ideal for schools, colleges, etc.



SC402—SC405

Series E. For Accurate Analytical Work. Gold-plated brass weights, tall form, with small knob, accurately adjusted; fractions of a gramme in pure nickel and aluminium in separate divisions covered by a glass plate. Complete with rider, .01 gramme, and forceps in velvet-lined case as figured.

SC402	50 grammes to 0.001 gramme	...	...	...	...	£2 5 0
SC403	100 grammes to 0.001 gramme	...	...	...	...	£2 12 6

MAXIMUM LIMITS OF ERROR.

Nominal Value of Weight.	Series E. SC402, 403.	Nominal Value of Weight.	Series E. SC402, 403.	Nominal Value of Weight.	Series E. SC402, 403.
100 grm.	.00015 grm.	1 grm.	.0001 grm.	0.01 grm.	.0001 grm.
50 "	.00015 "	0.5 "	.0001 "	Rider	
20 "	.00015 "	0.2 "	.0001 "	0.01 "	.0001 "
10 "	.0001 "	0.1 "	.0001 "	.005 "	.00005 "
5 "	.0001 "	0.05 "	.00005 "	.002 "	.00005 "
2 "	.0001 "	0.02 "	.00005 "	.001 "	.00005 "

Series F. For General Chemical Work. Weights, pattern as above, but in polished brass. Fractions of a gramme in nickel and aluminium. Complete in case.

SC404	50 grammes to 0.001 gramme	...	...	...	...	£1 5 0
SC405	100 grammes to 0.001 gramme	...	...	...	...	£1 10 0

MAXIMUM LIMITS OF ERROR.

Nominal Value of Weight.	Series F. SC404, 405.	Nominal Value of Weight.	Series F. SC404, 405.	Nominal Value of Weight.	Series F. SC404, 405.
100 grm.	.0005 grm.	1 grm.	.0002 grm.	0.01 grm.	.0002 grm.
50 "	.0005 "	0.5 "	.0002 "	Rider	
20 "	.0005 "	0.2 "	.0002 "	0.01 "	.0001 "
10 "	.0005 "	0.1 "	.0002 "	.005 "	.0001 "
5 "	.0004 "	0.05 "	.0002 "	.002 "	.0001 "
2 "	.0003 "	0.02 "	.0002 "	.001 "	.0001 "

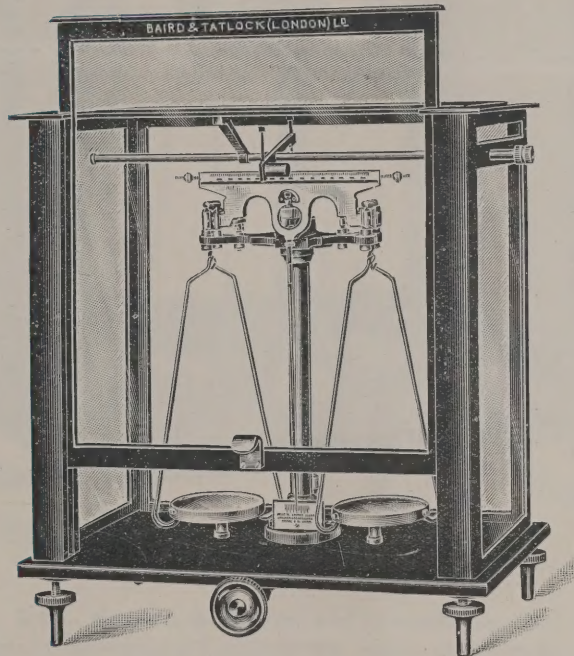
B. T. L.

E BAIRD & TATLOCK (LONDON) LTD., 14-17 CROSS ST., HATTON GARDEN, LONDON, ENG. ≡



Specially suitable
for Tropical use.
See also our leaflet
310, Best Quality
Stainless Steel
Weights.

Almet Balance



SC248

The above is the Tropical model of our "New Empire Balance," no wood being used in its construction. The Balance is fitted with improved fall away release and has a capacity of 200 gm. in each pan, and sensitive to 0.1 mg., it has a divided beam 13½ cm. long, white figuring on electrolytically deposited black finish. All agate knife edges and planes, all screws of stainless steel and pans chromium plated. Black glass sole and sliding door. The case is of oxydised brass, thus avoiding all possibility of warping, shrinkage, or attack by insects.

SC248 Almet Balance—Specification as above d£13 10 0

B. T. L.

BAIRD & TATLOCK (LONDON) LTD., 14-17 CROSS ST., HATTON GARDEN, LONDON, ENG.

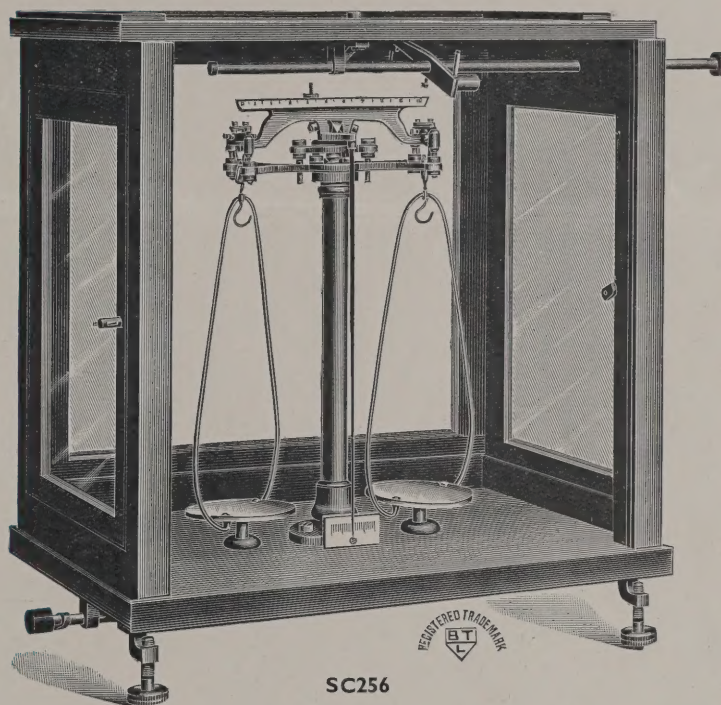


Analytical Precision Balance

For suitable
Weights, see our
Circulars :

No. 310. Stainless
Steel
Weights.

No. 311. Best Gilt
Weights.



SC256

SC256 B.T.L. Balance, Analytical and Precision, to carry up to 200 grammes and sensitive to 0.1 milligramme. Beam, 13 centimetres long, of gun-metal gilt, with round pointer. In place of a rider scale, the beam itself is divided and graduated in 100 divisions, so that moving a 5-milligramme rider the full length of the beam will cause an alteration of the equilibrium of the balance by one centigramme. In this way milligramme weights are not required, one notch corresponding to every 0.1 milligramme and every ten notches to one milligramme. The time of oscillation, with a medium load, is only 9 seconds, this being the shortest time in which the oscillations can be read off with certainty. Owing to the low situation of the centre of gravity, the sensitivity is the same for any load. The knife edges and planes, as well as all contacts of the beam and pan suspensions, are of agate. The Balance is mounted on black plate-glass sole with levelling screws, and is provided with doors opening on all sides

... .. **£25 0 0**

Special features : Gold-plated Beam.

Pans and Stirrups of hard silver alloy.

Improved fall away release mechanism.

All Steel Screws of Stainless Steel.

This balance has replaced its continental rivals in many important Laboratories.

Please insert this in your copy of our Standard Catalogue

